

CONTENTS for MARCH, 1924

Illustrations.	
Loading Apples at Hobart (Tas.)	cover
Mr. H. W. Clapp	169
Device for coloring Citrus Fruits	171
Mr. S. Brentnall	173
Ohanez Grapes at Almeria, Spain	178-9
Apricot Tree at Riverside, near Horsham (Vic.)	196
T shaped Steel Dunnage for ships' holds	202
Contents.	
Answers to Correspondents, Citrus Culture, Black Walnuts, Passion-fruit	202-3
Apple, New	208
Australian Conference of Fruitgrowers	174
Banana Industry	170
Beekeeping Notes	206
Citrus Grower, Coloring Citrus Fruits, Crop Prospects, Orange Pack	171-4, 187, 192
Cold Storage, International Congress	168
Commercial News	188-9
Commercial Planting	212
Dried Fruits Department, Association and Board Meetings, Weevils	180-1, 189-90
Developing the Fruit Industry, Railway Advertising	169-70
Flesh Collapse in Apples	175
Fruit Culture, Successful	176-7
Fruitgrowing under Irrigation	185
Fruit Shipments, Improvements in	202
Grapes for Export	178-9
Horticultural Research Bureau	181
Markets, British and Australasian	210-11
News in Brief	168
New South Wales, Royal Show, Horticultural Research Bureau, District News	171-2, 181
New Zealand, Statistics, Marketing	199
Orange Packs	192
Obituary	190
Orchard Notes, Seasonable	184
Passion-fruit Culture	184
Peaches, Export of	187
Personal	170
Phylloxera Legislation in S.A.	177
Punishing Plant Pests	xix.
Poultry Notes	204, 6
Queensland, Banana Industry, Fruit Marketing Act, Stanthorpe Show	170, 182-4, 193
South Australia, Grape Industry, Fruit Case Act, Phylloxera Legislation	177, 185-6
Subscribers' Payments	214
Tasmania, Export, Seasonable Notes	200
Tractor Demonstration	190
Victoria, Fruit Shows, Central Fruitgrowers' Meeting, Cool Store Congress, Orchard Registration, Fruit Fly	195-8
Walnut Culture, Australian Conditions	207-8
Western Australia, Fruit Export	187

INDEX TO ADVERTISERS.

Banks—	
Primary Producers' Bank of Aust. Ltd., 11 Castlereagh-st., Sydney, N.S.W.,	p. xviii.
Canning Machines—	
Heine, John and Son Ltd., Sydney, N.S.W.,	p. xxix.
Tombs & Howcroft Pty. Ltd., 369 Post Office Place, Melbourne, Vic.,	p. xxv.
Cold Storage—	
Bender and Co., 100 Elizabeth-street, Launceston, Tas.,	cover ii.
Cultivators, Ploughs, etc.—	
Harvey, D., Box Hill (Vic.),	p. 203.
"Newlight," H. V. Mackay Pty. Ltd., Sunshine, Vic.,	pp. 213 & 214.
Dehydration—	
Latham, D. J., Sun Buildings, Queen-street, Melbourne,	p. 206.
J. H. Morton, Bank N.S.W., Sydney,	N.S.W., p. 189.
Vincent, Geo., Oswald-lane, Darlinghurst, Sydney, N.S.W.,	p. xxvi.
Dried Fruits, etc.—	
McClure, Valentine and Co. Pty. Ltd., 49 William-st., Melbourne, Vic.,	p. xix.
Mildura Co-operative Fruit Co. Ltd., Mildura, Vic.,	p. x.
Explosives.	
Gollin & Co. Pty. Ltd., Melbourne, Sydney, Adelaide and Wellington,	p. 213.
Fruit Buyers—	
Brooke, C. M., & Sons, Whiteman-street, South Melbourne, Vic.,	p. 192.
Fruit Tree Suppliers—	
Balhannah Deciduous Nurseries, Balhannah, South Australia,	p. xxii.
Brunning, John, and Sons, Somerville, cover iv.	
Ferguson, F., & Son, Australian Nurseries, Hurstville (N.S.W.),	p. xxii.
Gray, W. G., Allwood Nurseries, Hurstbridge, Vic.,	p. 190.
Kinglake Nurseries, Yarra Glen, Vic. (J. W. Lawrey),	p. xix.
Lasscock's Nurseries, Henley Beach Road, Lockleys, South Australia,	p. 204.
Picnic Point Nurseries, Bairsdale, Vic. (C. J. Goodman),	cover ii.
Swane Bros., Ermington, N.S.W.,	p. 214.
Two Bays Nurseries, Moorooduc, Vic.,	p. ix.
Fruit Graders—	
"Ellisizer," Ellis Grader & Motor Co., 226 Flinders-lane, Melbourne, Vic.,	p. 207.
"Guider," J. L. Holland, Box 57, Shepparton (Vic.),	p. xv.
"Lightning" Lightning Fruit Grader Co., Merrigum, Vic.,	p. 193.
"Master Sizer," Buzacott & Co. Ltd., 7-11 Market-street, Sydney (N.S.W.),	p. xxviii.
Insurance, etc.—	
Farmers' and Settlers' Co-operative Insurance Co. of Aus. Ltd., 360 Collins-street, Melbourne, Vic.,	p. 208.
Manures, Fertilisers, etc.—	
"Cresco" Fertiliser, Cresco Fertilisers Ltd., 111 North Terrace, Adelaide (S.A.)	p. ix.
"Sulphate of Ammonia," Agents all States,	p. 201.
Medicines—	
"A.M.S.," T. A. Dickson, Geelong, Vic.,	p. 211.
Motor Lorries—	
"Ford" One-ton Truck: Tarrant Motor Pty. Ltd., Melbourne, Vic.,	p. xxvii.
"Reo" Queen's Bridge Motors Pty. Ltd., South Melbourne,	p. 194.

Orchard Requisites.

McPherson's Pty. Ltd., 582 Collins St., Melbourne (Vic.), p. xxvi.

Orchard Tractors—

"Case" Commonwealth Agric. Service, Eng. Ltd., Adelaide, S. Aust., p. xii.
"Fordson," Tarrant Motors Pty. Ltd., Lonsdale-st., Melbourne, Vic., p. xxvii.

Poultry—

Karswood Poultry Spice, Agents all States, p. 205.
Stephens, Reg., Goodwin Poultry Farm, Blackburn (Vic.), p. 204.

Printing—

Horticultural Press Pty. Ltd., 9 Queen-street, Melbourne, p. xxx.

Refrigerating Machinery—

Werner, R., & Co. Pty. Ltd., Richmond, Vic., cover iii.

Seeds, Etc.—

Bunning, F. H. Pty. Ltd., 64 Elizabeth Street, Melbourne, p. xxiii.
Watters and Sons, 251 Swanston street, Melbourne, Vic., p. 208.

Shipping Facilities—

Australian Commonwealth Line of Steamers, offices in all States, p. 212.

Spray Material—

"Blue Bell" Arsenate of Lead, 31 Queen-street, Melbourne, Vic., p. iii.
"Elephant" Brand, Jaques Pty. Ltd., Maden-grove, Burnley, Vic., p. xvi.
"Harbas" Spraying Oil, E. Russell, 60 Queen-street, Melbourne, p. 214.
"Hemingway's" Arsenate of Lead, E. Russell, 60 Queen-st., Melbourne, p. 193.
"Swift's" Arsenate of Lead, H. W. Peabody and Co., Sydney and Melbourne, p. viii.
"Orchard" Brand, Buckeye Harvester Co., Francis-street, Melbourne, p. xxxii.
"Vallo" Arsenate of Lead, A. Victor Leggo and Co., Melbourne, Sydney and Brisbane, pp. xii. & xxii.
"Black Leaf 40," Coastal Farmers' Co-operative Soc. Ltd., Melbourne, p. xxii.
Neptune Oil Co. Ltd., River-street, Richmond (Vic.), p. xxviii.
Newell & Co., 189 King-street, Melbourne, p. xix.

Spray Pumps and Guns—

"Bave-U" Power Sprayer, Russell and Co., Box Hill, Vic., p. xxiv.
"Edgell" Spray Pistol, Buzacott & Co. Ltd., 7-11 Market-street, Sydney (N.S.W.), p. xxviii.
"Kangaroo," Chandler, D. and W., Pty. Ltd., Brunswick-street, Fitzroy, Vic., p. xxv.
Dangar, Gedy & Co. Ltd., Young Street, Sydney, p. 207.
"Doncaster," Langwill Bros. and Davies Pty. Ltd., South Melbourne, Vic., p. xxix.
"Nufrend" Spraying Outfit, Metters Ltd., Rundle-street, Adelaide, S.A., p. xxi.

Strapping Fruit Cases—

Gerrard Wire Tying Co. Pty. Ltd., 119-25 Hawke-st., West Melbourne, p. iv.
"Ti-it," Noble, Murray & Lemmon, 136 William St., Melbourne, p. x.

Tree and Stump Pullers—

Trewhella Bros., Treutham, Victoria, stumping jacks, etc., p. xii.
"Digger" Multigears Pty. Ltd., 99 Queen-street, Melbourne (Vic.), cover iv.

Wood Wool—

Lawford's Fruit Exchange Pty. Ltd., Doncaster, Vic., p. xxi.

Wrapping Paper—

Gabb, Chas. R., & Co., 88-94 Franklin St., Melbourne, p. xxiii.

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried
Fruits Industry of Australasia.

Published the First of each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos, should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

Victoria (Head Office): 9 Queen Street, Melbourne. **New South Wales:** Carruthers, Farrum & Co., 77 King Street, Sydney. **South Australia:** W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. **Tasmania:** Saunders & Co., Murray Street, Hobart. **Western Australia:** D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. **Queensland:** Gordon & Gotch Ltd., Queen Street, Brisbane. **New Zealand:** Gordon & Gotch Ltd., Wellington. **Dunedin and Auckland:** Great Britain: Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOOBRIDGE, M.L.C.

INTERNATIONAL COLD STORAGE CONGRESS.

The International Cold Storage Institute, 9 Avenue Carnot, Paris, has arranged that the fourth International Cold Storage Congress shall be held in London, commencing on Monday, 16th June, 1924, and continuing until Saturday, the 21st. The discussions will be followed by a series of excursions to the Empire Exhibition, and to various industrial establishments.

Special interest attaches to the Conference on account of the importance of the items to be dealt with, the sections of the Empire Exhibition representing refrigerated overseas foodstuffs, and the remarkable progress which has been made during the last 10 years in the construction and use of refrigerating apparatus. It is hoped that representatives from all parts of the world will take an active part in the Congress, which is the first of its kind since 1913, when the third International Cold Storage Congress was held at Chicago.

An invitation is extended to all Cold Storage Associations and Committees to send representatives to the Congress. Over 100 papers dealing with various aspects of the subject have already been submitted for discussion.

IMPERIAL PREFERENCE.

The London correspondent of the "Fruit World" writes as follows:—"I feel sure that Imperial Preference, if not Protection generally, will shortly come into effect, probably sooner than many people think. I am a strong advocate and worker for that cause, and have been since the days of the Imperial Federation League dating back to 1891."

OLDEST PEAR TREE IN AUSTRALIA.**Is It at Launceston (Tas.)?**

There is a Pear tree in the City Park, Launceston, which the Superintendent of Reserves (Mr. W. McGowan) recently stated was planted about a century ago in its present spot, which was then part of the old Government cottage garden. He declared that it is the oldest Pear tree in Australia.

The existence of this garden a hundred years ago, he said, also accounted for so many old trees still in the Park. The Pear was of the Bon Chretien variety, which was not quite identical with the Williams' Bon Chretien of to-day. The tree still bears, to the delight of children who frequent the park. In the olden days, particularly during the Victorian gold rush, it supplied the market in the then new State, and one of its achievements was the production of 70 bushels, which were sold at £1 per bushel.

NEWS IN BRIEF.

There is a solid weight of opinion in Victoria against any funds, raised by means of an orchard registration fee, being used for the purposes of paying compensation for losses incurred through the Fruit Fly outbreak. But apparently the "Orchard Registration Act" is a long way off yet.

Now is the time for sowing seeds for growing green manure crops for turning under in the spring.

The advantages of advertising, and the fine work undertaken by the Victorian Railways Department are described in this issue.

Successful fruit shows have been conducted in the several States.

When are we going to organise National Fruit Weeks in Australian capital cities, as part of an educational advertising campaign to increase the consumption of fruit?

In view of the increasing importance of the citrus industry in New South Wales, growers are pressing for the appointment of a Citriculturist for that State.

The proposal of the Victorian State Advisory Board to sell the following fruits by number instead of by weight has met with approval from both growers and distributors. The fruits include Apples, Pears, Citrus, Persimmons, Bananas, Peaches, Quinces, and Passion-fruit.

It is reported that downy mildew has appeared in some of the vineyards in the Corowa district, and in Waggunyah district (Victoria).

The Hon. A. E. Chandler, M.L.C., of Victoria, stated at a public meeting recently that Western Australian Apples in jarrah cases were eagerly sought for by buyers, and held pride of place in the English markets.

The international Cold Storage Congress to be held at London in June is a most important event, and Australia should be fully represented.

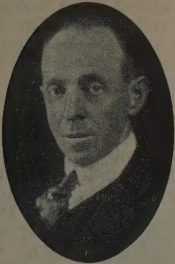
The Royal Sydney Show at Easter is a big event. The fruit exhibits at this Show are more comprehensive than at any other Australian Show.

The Premier of Tasmania (Hon. J. A. Lyons) was interviewed on March 14th by Hon. J. W. Evans with regard to a moratorium for Huon fruitgrowers. It was stated that there were legal difficulties in the way of establishing a moratorium, but the Ministry would see that growers were not unduly pressed.

Developing the Fruit Industry.

Advertising is a Great Force in Increasing Fruit Consumption.

Commendable action by Victorian Railways Department.



Mr. Harold W. Clapp,
Chairman of Commissioners
Victorian Railways, whose
leadership in the Fruit
Advertising Campaign
is greatly appreciated.

THE CLOSING MONTHS of 1922 beheld the fruitgrowers of Victoria burdened with a large surplus. Overseas sales of dried and canned fruit had fallen short of expectations, and the prospects for the coming season were far from reassuring.

To meet the serious position which appeared to be developing, a campaign of publicity was instituted to awaken widespread public interest in one of the State's great primary industries, and stimulate the sale and consumption of an important commodity.

In this campaign the Railway Commissioners co-operated to the fullest extent.

Artistic posters were designed and exhibited on railway stations throughout the State. Tastefully prepared booklets extolling the virtues of citrus and other fruits were printed by the thousand and circulated in every quarter, where it was recognised that market possibilities existed.

Fruit kiosks, to facilitate the purchase of all kinds of fruits and the zestful juices extracted therefrom, were constructed on the chief metropolitan stations, and the more important country stations. Special schedules governing the despatch of fruit consignments from point to point were also a feature making for the approval and co-operation of the buying public.

The result of the publicity propaganda and improved organisation is disclosed by the sustained increase in sales to the public in lots of one, two, or three cases. The records of the Department reveal that during the months of December, 1922, and January and February, 1923, individual buyers received consignments totalling 58,000 cases, as compared with 42,800 during the corresponding period of the previous season, this representing a gain of 15,200 cases, or about 36 per cent.

During March and April, 1922, the number of cases of fruit forwarded totalled 27,672. During the same period in 1923, the number despatched reached 37,044, a gain of 9,372 cases.

The record of increase over corresponding periods of the two seasons is also of interest, inasmuch as it further attests the success of the co-operative efforts.

Accepting a broad national viewpoint in relation to the fruit industry, the Victorian Railways Department under the leadership of its Chairman, Mr. H. W. Clapp, has developed an advertising campaign which has already wrought untold good.

In these days, when too many negative statements in relation to the industry are being published, it is heartening to the growers to find a big public Department giving a strong constructive lead towards the proper appreciation of the industry, and assisting in its development.

Let these facts sink in: (1) Well directed advertising will largely increase the consumption of fruit; (2) With such increased consumption the bogey of over-production disappears.

Australians should eat more fruit, and the Railway Department is telling them so.

May the campaign continue, and prove mutually prosperous.
Editor.

turned soldiers, particularly in the Mildura and the Goulburn Valley districts, is also increasing in importance.

The vineyards now comprise 38,892 acres (27,550 acres bearing) cultivated by 2,775 growers, who produced last year 1,879,964 cwt. of Grapes. Of this total the estimated quantity for wine making was 272,462 cwt.; for table consumption 66,084 cwt.; and for dried produce Raisins, Sultanas and Currants, 1,541,418 cwt.

The marketing of 383,601 cwt. of dried fruits, representing an increase of 118,108 cwt. on the production of the previous year, furnished a merchandising problem of some magnitude. It could be solved only by increasing the home consumption, and the Railway Commissioners co-operated to the fullest extent in the propaganda for stimulating the sale of this commodity.

A special issue—100,000 copies—of a Raisin pamphlet was distributed far and wide. Raisin recipe books were prepared for the use of householders; attractively worded showcards were displayed prominently at all refreshment rooms and fruit kiosks, and posters illustrating the importance of "Everyday in Every Way—Raisins" were displayed on stations throughout the country; and to prove that the effectiveness of a well-rounded campaign lies a good deal in its completeness, the manufacture of Raisin bread was commenced in the Railway bakeries in West Melbourne.

Public appreciation was never for an instant in doubt. The dietary virtues of Raisin bread seems to have been realised simultaneously by a large proportion of the population. A large sale now fills the public need, and providing that the high standard of manufacture is maintained, the consumption of the new commodity will be a factor in the absorption of our Raisin surplus.

The Value of "Fruit Trains."

Another problem to be solved was the disposal of the current season's large crop of fresh fruit. Here the experience gained in the marketing of the 1923 output proved helpful, and the continuance of the "fruit trains," which bring the grower and consumer into closer touch was a factor in the successful disposal of the crop.

During periods of last year fruit trains were despatched from Goulburn Valley centres, notably Shepparton and Merrigum, to stations on convenient routes, and during the period of January 31st to March 31st approximately 9,330 cases of fruit were disposed of to country residents.

This year truck loads have been sent from Shepparton to Yaapect and

	1922.	1923.	Increase
Cases.	Cases.	Cases.	
May	7,349	9,571	2,222
June	5,622	7,887	2,265
July	6,525	8,804	2,279
August	7,513	9,755	2,242
September	5,527	7,497	1,970
October	5,070	5,611	541

A kindly climate, radiant sunlight, and soil conditions fostering successful propagation and healthy tree development all tend to increase the importance of Victoria as a fruitgrowing State.

In the fruitgrowing areas in 1921-22 approximately 8,300 growers cultivated 87,000 acres, and the production contrast of that year and of the year following denotes the healthy vitality of the industry.

	1921-22.	1922-23.
Cases.	Cases.	Cases.
Apples	1,768,800	2,089,017
Pears	681,024	666,631
Quinces	76,946	63,837
Cherries	66,969	92,407
Apricots	208,215	230,876
Peaches	905,477	966,952
Lemons	103,127	109,347
Oranges	237,949	259,330
Figs	22,359	15,313
Plums	207,432	258,117
Unclassified		

Fruits 43,897 32,246

The berry crop also showed a marked increase in the appended totals:—

1921-22.	1922-23.	Increase.
16,157 cwt.	17,759 cwt.	1,602 cwt.

The viticultural industry, which has attracted a large number of re-

Donald; from Merrigum to Manangatang, Tatura to Warrnambool, and also to more distant centres. Results were of a nature to justify an extension to other districts, and the disposal of thousands of cases has been effected.

Fruit in Case Lots.

To encourage the purchase of fresh fruit in case and half-case lots, the following specially cheap rates for rail carriage were introduced on 1st December last:—

Up to 30 lbs.

To 25 miles	6d.
From 25 miles to 50 miles . .	9d.
From 51 miles to 101 miles . .	9d.
From 102 miles to 150 miles . .	1/-
From 151 miles to 200 miles . .	1/-
From 201 miles to 250 miles . .	1/-
From 251 miles to 300 miles . .	1/-
From 301 miles to 400 miles . .	1/-

From 30 up to 60 lbs.

To 25 miles	9d.
From 25 miles to 50 miles . .	1/2
From 51 miles to 101 miles . .	1/2
From 102 miles to 150 miles . .	1/2
From 151 miles to 200 miles . .	1/3
From 201 miles to 250 miles . .	1/3
From 251 miles to 300 miles . .	1/4
From 301 miles to 400 miles . .	1/8

The results of the improved organisation and the propaganda make it quite clear that the successful carrying on of the fruit industry lies in following modern business methods; in skilful advertising and merchandising, and in securing the hearty co-operation—to their mutual advantage—of all concerned.

Stabilising the Industry.

At present there are 8,500 orchardists in Victoria, and the number is being augmented each year. In the Northern and North-Western portions of the State wide areas are being won from the primitive fastness of Nature, and a new hallowed beauty has followed in the track of the plough. Millions of pounds have been expended by the Government in railway works and in irrigation projects, and the stabilising of the fruit industry is of the highest importance to every Australian, but especially to those who enjoy the prosperity of Victoria, aptly called "The Garden State."

Appreciation is due to Mr. H. W. Clapp, Chairman of Victorian Railway Commissioners for his enterprise and leadership, coupled with thanks for the co-operation of his fellow Commissioners and the railway service generally in their successful endeavour to strengthen the important primary industry of fruitgrowing.

RAISIN BREAD.

The Railways' Publicity Campaign.

Mr. H. W. Clapp, Chairman of Commissioners, Victorian Railways, referring to the article on "Raisin Bread in America," by Mr. E. J. Roberts, which recently appeared in the "Fruit World," gives some interesting particulars of the production of raisin bread in Victoria, and states

the difficulties mentioned by Mr. Roberts in regard to the use of seeded muscats have not been met with here, although seeded lexias are always used. By the use of reasonable care, which does not add to the cost of production, the raisins are well mixed and separated in the dough, and in the finished loaf the fruit is well distributed, shewing that it does not settle to the bottom on account of its weight.

The Banana Industry.

Bunchy Top in Queensland.

Proposal to Reduce Duty.

Queensland growers are perturbed at the appearance of bunchy top disease in a Banana plantation north of the Brisbane River, while its progressive destruction in New South Wales has caused a slump in the Banana industry in that State. The outlook has become so serious that an agreement has been made whereby the Commonwealth, Queensland and New South Wales Governments are to co-operate in investigating the position.

An independent committee has been appointed to act in an advisory capacity, and its report has been received by the director of the Institute of Science and Industry (Sir George Knibbs), who, with the consent of the New South Wales and Queensland Ministries, proposes to immediately act on the recommendations made.

The committee stressed the great complexity of the trouble, and indicated that so baffling was the disease in respect to its cause and behaviour that it would be essential to carry out a well-planned scientific investigation to achieve success. This investigation should proceed along the cultural lines of the plant pathologist to discover a possible causal organism, and concurrently a horticulturist should be employed to endeavour to develop a resistant strain of Banana plants, by selection of suckers especially in Fiji.

The establishment of a small laboratory at Tweed Heads or Coolangatta was recommended. In addition, sufficient area for pot experiments upon infected plants under insect-proof enclosures, and also an experimental plantation of two acres in close proximity to the laboratory should be provided.

A well qualified scientific investigator will be appointed for a period of two years, which could be extended at the end of that time if required. The investigator will have the assistance of a bio-chemist, entomologist, or other specialists as required. This assistance would be readily provided by the departments interested.

A sum of approximately £4,200 was already available for the investigation, and a committee of three, representing the Commonwealth, New

South Wales, and Queensland Governments, would be responsible for the money, and would receive the reports of the investigator.

Duty on Bananas.

Queensland's Banana-growing industry has expanded rapidly since the imposition some years ago of a duty on foreign-grown Bananas. Previously Fiji and Java supplied the bulk of the Bananas required by the southern and western States, but since the Tariff on Bananas grown outside the Commonwealth, Queensland and northern New South Wales have done much to capture the market.

It now seems likely that the members of the Federal Parliament representing Western Australia, South Australia and Victoria will propose a reduction of this duty, as they contend that the duty has not benefited Australia generally, as only inferior fruit, of high price, is procurable in most of the States. Mr. J. G. Bayley, Federal member for Oxley, Queensland, said recently that if Queensland wished to have the duty maintained, she should send along only the best quality fruit, and in sufficient quantity to supply the southern markets, which was not the case at present.

A cable message from Suva on March 19 stated that the Fijian Chamber of Commerce was asking the Government to again approach the Australian Government with regard to remitting the duty on Fijian Bananas, which was regarded as harsh and unfair.

PERSONAL.

Congratulations to Mr. and Mrs. W. J. Foster, on the birth of another son on March 4th.

Messrs. Alan Edmunds and L. T. Pearce, organisers for the Australian Dried Fruits' Association are actively at work strengthening the organisation by increasing the membership, and vigorously pushing the Raisin Bread and carton campaign. With regard to Raisin Bread, the need for the adoption by bakers of a standard recipe is emphasised. One hundred bakers in and around Melbourne are now baking Raisin Bread.

Mr. J. R. Vail, late manager for Samuel Larkinson Ltd., London, has arrived in Melbourne, now to organise exports of fruit from Australia to London, Hull, and Rotterdam. For the London trade Mr. Vail represents Messrs. F. C. Bradley and Sons, Covent Gardens; for Hull, the Humber Fruit Brokers Ltd.; for Rotterdam, the International Fruit Company. With regard to trade with the last-named port Mr. Vail is hopeful of being able to arrange for direct shipping from Australia with boats having refrigerated holds.



Coloring Citrus Fruits

Interesting Commercial Tests in
U.S.A.
Success with Ethylene Gas.

THE SWEATING OF CITRUS fruits and the acceleration of the coloring of same have formed the subject of numerous tests by the U.S.A. Department of Agriculture.

As success has attended the efforts of the experimenters, a bulletin has been issued by the Bureau of Chemistry, U.S.A., Department of Agriculture, details of which are as follows:

The use of ethylene gas (C_2H_4) as a means of forcing the development of color in citrus fruit is the result of several years' research work upon the problem by Dr. F. E. Denny, of the Laboratory of Fruit and Vegetable Chemistry. During this time several gases that will bring about coloring were found, but ethylene is the safest, most economical, and most practical of those discovered.

The gas is made from alcohol, petroleum products, or natural gas. It can be procured in cylinders under a pressure of about 1,800 pounds per sq. inch. At ordinary temperature and this pressure, the gas is not in liquid form, and no solvent is used in the cylinders. Ethylene is combustible, and forms explosive mixtures with air when mixed with it in proportions between 5 and 20 per cent.

There is, however, little danger from this source, as the maximum dilutions used for coloring are about 1 part of the gas in 5,000 parts of air. Under the working conditions prescribed there is practically no danger of static sparks. The gas has no effect on animal life in the dilutions used. The mixtures recommended can be breathed for hours without the slightest inconvenience. Mixtures of 80 per cent. of ethylene and 20 per cent. of oxygen are used as an anaesthetic.

The gas can be procured in several types of cylinders. The one which has been used up to the

present time contains somewhat over 300 cubic feet under a pressure of 1,800 pounds. The filled cylinder weighs about 300 pounds, as is usually stated on a tag attached to each cylinder. The gas itself weighs 25 pounds, so that by weighing the cylinder at any time, the quantity of gas which it contains can be ascertained. The cylinders should not be exposed to unusual heat. They should be handled with ordinary care, and never exposed to contact with live wires.

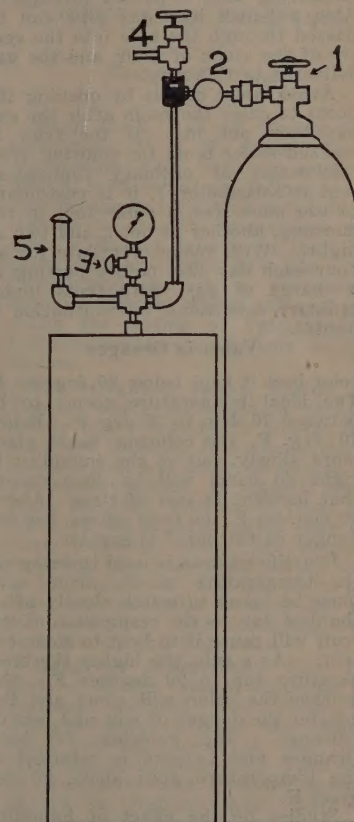
Because of the difficulty of measuring a small quantity of the gas when delivered under high pressure, the measuring device shown in the attached illustration was designed. The measuring tank has a capacity of $1\frac{1}{2}$ cubic feet at atmospheric pressure. When filled to 10 pounds pressure it will deliver approximately 1 cubic foot of gas; at 20 pounds 2 cubic feet, etc. It should not be filled above 50 pounds pressure, as it is tested to but 500 pounds. The safety valve (5) is set to blow out at between 60 and 80 pounds, thus reducing to a minimum the danger of blowing up the measuring tank.

Soft lead washers should be used in connecting the measuring tank to the ethylene cylinder. The outlet of the cylinder has a left-hand thread of unusual pitch, necessitating a specially made adapter. The outlet pipe of the measuring tank should be provided with a piece of $\frac{1}{2}$ -inch rubber hose, in order to connect it with an iron gas pipe leading to the centre of the stack of fruit, or it can be attached to the required length of ordinary garden hose.

The measuring device is operated as follows: All valves being closed, valve 2 is opened and valve 1 on the ethylene tank is very slowly and carefully opened slightly for 2 or 3 seconds. Valve 3 under the gauge is then opened and the gauge is read. This operation is repeated until the gauge shows the required reading (10, 20, or 30 pounds). Valves 1 and 2 are then closed and valve 4 is opened, releasing the gas into the delivery pipe.

When the gas has ceased to flow, and the pressure gauge registers zero, close valve 4.

Valve 2 is a guard valve used only to protect the measuring tank in case



Measuring device for the use of Ethylene Gas for coloring Citrus Fruits.

of leaks in valve 1. It is kept closed except when the measuring tank is being filled. Valve 3 is a guard valve to protect the gauge, which may be broken by the sudden opening of

valve 1. The gauges usually register up to 50 pounds, and if not protected might be exposed for an instant to several times that pressure. Valve 4, the outlet valve, is kept closed at all times except when the measuring tank is being emptied. If this is not done, air will diffuse into the measuring tank, and the next charge will not be pure ethylene, but a mixture with air.

When the measuring apparatus is used for the first time, allowance should be made for the air which it contains. This can be done by doubling the pressure on the first charge, i.e., if 1 cubic foot is desired, fill the tank to 20 pounds instead of 10 pounds, pressure.

If tight sweat rooms are used, 1 cubic foot of gas twice each day to 5,000 cubic feet of sweat room space will be sufficient. No allowance is made for space occupied by the fruit. Run the gas into the rooms in the morning and again before leaving at night. Usually a small hole is made through the sweat room walls, and the hose from the outlet pipe of the measuring tank is passed through it. Also a $\frac{1}{2}$ -inch iron gas pipe can be passed through the hole into the centre of the stack of fruit, and the gas delivered in this way.

Avoid losses of gas by opening the doors to enter the room after the gas has been put in. If the fruit is stacked under tents for coloring (two thicknesses of ordinary fumigation tent is satisfactory), it is customary to use more gas, a cubic foot in the morning, another at noon, and two at night. With rooms, ventilate for an hour each day just before putting in a charge of gas; with tents under ordinary conditions, no ventilation is needed.

Valencia Oranges

color best if kept below 80 degrees F. The ideal temperature seems to be between 70 deg. to 75 deg. F. Below 70 deg. F. the coloring takes place more slowly, but if the humidity is right no harm will be done except that incident to loss of time. Above 80 degrees F. the fruit colors, but the danger of wilting it is greater.

If artificial heat is used to bring up the temperature of the fruit, care must be taken to watch closely after the first day, as the respiration of the fruit will cause it to heat to some extent. As a rule, the higher the temperature (up to 90 degrees F.), the quicker the color will come and the greater the danger of wilt and loss of buttons. The coloring of both Oranges and Lemons is retarded if the temperature goes above 90 degrees F.

Studies on the effect of humidity have not been completed. A humidity of about 80 per cent. seems to be satisfactory. Very high or low humidities should be avoided.

The fruit will continue to color after removal from the sweat rooms or tents, so that it is not necessary to

keep it going until the desired color is obtained.

For Lemons

the optimum temperature is 60 degrees to 65 degrees F. Keep the temperature down and ventilate frequently if you wish to hold the buttons. The buttons can be held by keeping the fruit cool and well ventilated. Coloring usually takes two weeks under these conditions, and not over 2 cubic feet of gas per day per carload of fruit should be used.

Hundreds of cars of Valencia Oranges, and not a few cars of Lemons which have been colored with ethylene have been shipped from California, and no unusual reports of decay have been received.

Some variation in fruit

is to be expected, and no set rules which will be satisfactory in every case can be given. A little thought and some experimental work on the part of packing house managers will soon show them the best treatment for the fruit they are handling.

Cylinders of ethylene containing 25 pounds (300 cubic feet) of the gas can be obtained for £2/2/-; a deposit of £2/10/- is required for the cylinder, which is credited when it is returned. Freight charges are extra.

For Oranges (one carload) 5 cubic feet of gas a day for five days is the maximum that has been used. This amounts to 25 cubic feet per carload, so that one cylinder will color 12½ cars at a cost of 3/4 per car. Using 2 cubic feet per day, the minimum amount, 30 cars can be colored with one cylinder at a cost of 1/5 per car. This is the net cost for gas alone; express or freight charges on filled and empty cylinders must be added.

In using the method,

store a representative sample of the fruit where there are no gas fumes or stoves. Compare this sample from day to day with the fruit which is being colored. Results are not usually apparent until after the second day. A better way is to exactly match, Orange for Orange, two samples of 25 fruits each, placing one in the sweat room and keeping the other out for comparison.

Any inquiries about the method should be addressed to the Laboratory of Fruit and Vegetable Chemistry, 148 South Anderson-street, Los Angeles, California.

History of the Investigations.

Following on the above, some notes may be given from an address by Dr. Denny at a meeting of the Lemon Men's Club in October last, the proceedings of which are reported in full in the "California Citrograph" for December, 1923. Prior to Dr. Denny's address, Mr. E. M. Chace, chemist in charge of the laboratory of fruit and vegetable chemistry, briefly sketched the history of the investigations which ended in Dr. Denny's discovery of ethylene.

The first experiments were made during the 1914-15 season, when it

was found that some of the constituents of the air of sweat rooms had an influence on the coloring of fruit, but no definite results were obtained. Later on Dr. Denny took over the work, and soon identified the class of compounds responsible for the coloring. He then began using the more common of these gases as coloring agents, and discovered that ethylene was the one giving the best results, and since then attention has been chiefly devoted to the adaptation of the method to commercial conditions.

In commencing his address, Dr. Denny stated that the use of ethylene gas had been applied to hundreds of carloads of Oranges and Lemons, and practical tests had been made by several packing houses. He then continued:

"What is Ethylene Gas?"

"It is an invisible gas, a little like acetylene gas. One can smell it if close enough to it when it comes from the tank. But if you release enough of it into a room to color the fruit you probably would not notice its presence from your sense of smell. It distributes itself equally into the room, penetrating even the meshes of one's clothes. It will get into the waste basket and into fruit in the boxes.

"We think that the ethylene gas gets into the pores of the fruit and thus starts the coloring process."

Reference was then made to the cost of the gas, and the tanks in which it was obtained, as previously described.

As to

the sort of rooms required,

Dr. Denny asserted that last summer almost every kind was used and with satisfactory coloring. The character of the room, as to whether it be air tight or simply one made by covering the fruit with a Lemon tent, made little difference.

During the summer, the speaker stated that it would be better to use a room from which some of the heat might be let out. In one room used, 90 feet long and built like a tunnel, the gas penetrated to the end and the fruit was uniformly colored. Paper board rooms were also used with success and the fruit was colored. The need of changing the air in that kind of a room was emphasised. The ventilating would not retard the process of coloring but a little more gas would be required, he stated.

"How often should the gas be applied and how much gas should be liberated?"

Only general advice could be given on this, he declared. Speaking of a room holding practically a carload or, say, 700 boxes, the speaker suggested the use of one cubic foot of gas in the morning and an equal amount in the evening. For Oranges a little more was required. In the case of Oranges one cubic foot in the morning, another at noon, and two cubic feet at night would be about right.

Dr. Denny stated that there was need for more experiment on this phase of the subject, and recommended each packing house manager to experiment according to the type of room he used.

"Is ethylene dangerous,

is it poisonous, is it inflammable?" he continued. "Naturally we don't think that it is dangerous, for we have been working in it right along.

"It will burn if a match is touched to it as it comes out of the tank; and, in fact, they use it for certain types of welding."

In order to make the material explode it would be necessary to mix 3 per cent. of the gas with the air, Dr. Denny declared. In an ordinary room of 5,000 cubic feet it would be necessary to get 150 cubic feet of the gas liberated all at once, which was from 75 to 150 times more than was ordinarily used. "That is, you would have to measure in and let out the capacity of the smaller tank 30 times to reach the explosive point."

As to the effect of the gas on the human system the speaker said that he had breathed it pure, as it came from the tank, and had never even experienced a headache therefrom.

"According to medical opinion it is harmless."

Speaking of temperatures

at which the gas should be applied, Dr. Denny asserted that with the temperature of the room below 60 degrees, the coloring of Lemons would be slow. With temperatures from 60 to 65 degrees good color was usually obtained on Lemons. At 65 to 70 the coloring would go on faster as was equally true from 75 to 80 degrees. But at 90 degrees the coloring proceeded more slowly.

Speaking of Oranges, he said that they required more temperature than Lemons, and that 70 to 75 degrees was about the minimum at which coloring process would proceed.

On the subject of

holding the temperatures

at uniform point, Dr. Denny said that there were various methods employed in the different houses. In some instances the steam plant used for the Lemon washing fluid was employed. Other managers had experimented with electrical equipment.

"Another type of heater used is a hot water type which requires but a small amount of piping. It has attached to it an automatic arrangement by which the temperature can be held at the point desired. When it reaches the point at which it should remain the heat is automatically shut off. As soon as it drops the heat automatically comes on, thus insuring a uniform temperature and tends to bring about good coloring."

As to humidity,

the fruit would color from 65 to saturation, that is, it would color at all humidities between those points. After fruit begins to color it would of

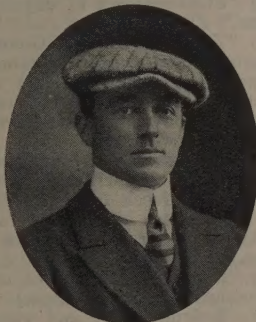
itself add humidity. More work needed to be done on this.

"Can you hold the buttons on Lemons? We have experienced a lot of dropping. This needs much experimental work in your own curing rooms. We have found that by keeping the temperature down and using $\frac{1}{4}$ cubic feet of gas twice per day, Lemons can be colored and hold the buttons on."

Effect of the Gas.

"Oil stove gas or ethylene gas causes buttons to fall off. The gas evidently has some effect on the cells or tissues of the fruit. It causes an enlargement of the cells which forces the buttons off. It evidently causes some new growth—a renewal of the life processes of the fruit.

"Plants and human beings breathe in oxygen and breathe out carbon dioxide. Lemons do the same thing but give out two or three times as much carbon dioxide after treatment by ethylene. I do not know what is going on inside the Lemons while this change in coloring is going on."



Mr. Stanley Brentnall, of Bamawm, one of the Directors of Victorian Central Citrus Association

At this point Dr. Denny called on several managers of packing houses and others who have used the ethylene gas method of curing to express themselves as to their experiences.

Practical Experience.

The first admitted having been very sceptical concerning the method, but had proved its value. Curing tents were used over the Oranges, and though there was an additional expense in gas there was a saving of labour. Although the buttons came off the Lemons, the fruit had a good live appearance, and Oranges showed the same results. Sweating of the fruit must not be hurried, or trouble was likely to result.

Another manager stated that the ethylene method was superior to the use of oil stoves, giving neither odour nor taste to the fruit. He had found that a smaller application of the gas at more frequent intervals gave better results.

The ease of application was referred to, and it was stated that with the ethylene method the danger of smutting the fruit was eliminated. The

previous statement was confirmed that tents were superior to rooms for the sweating of Lemons.

Another manager said he had found the best temperature to be from 70 to 80 degrees with ventilation from 5.30 to 7 p.m. He believed that possibly the sprinkling of the floors of the sweat rooms might have something to do with retaining the buttons.

Another speaker stated that an application of a five-pound gauge pressure of the gas twice a day with a temperature of 72 to 75 had resulted in the retention of the buttons.

Others stated that they would not care to go back to the old method, and that the boxes on the lower tier were just as well colored as the upper boxes, while no trouble from decay had been experienced. The opinion was expressed that the amount of the dose was of more vital importance than humidity. The conclusions were practically all favourable to the use of the ethylene method.

CITRUS CROP PROSPECTS.

New South Wales.

Major H. R. Hallard, Market Representative, N. S. W. Central Citrus Association Ltd., writing early in March, 1924, reports as follows:—The crop prospects for Citrus in N.S.W. according to present appearances suggests a lighter crop even than last year, probably about 20% less. The Cumberland district is particularly light as regards Mandarins and generally the setting of Valencias and Common oranges shows only medium figures.

The Irrigation Areas, Leeton and Yanco, which promised a tremendously heavy setting 2½ months ago, have not come up to expectations as a heavy fall has occurred during the period mentioned. In total it would seem that the production from this Area will be slightly higher than last year, probably 10%. The increase, however, has been made up by newly bearing trees. The old trees perhaps, have not quite the crop they had even last year. The above applies to both Navels and Valencias.

Mangrove Mountain.—This District, of all the Coastal Districts, has perhaps suffered less from the drought which effected the Coastal fruit growing Areas of this State from Spring to December. Their crop of Mandarins and Common oranges should be slightly higher than last year, and the Mandarins will undoubtedly be of much better quality and size. Their Valencia and Common orange crop though variable, will also be slightly higher than last year.

Kurrajong.—Mandarins will be very light, and the crop of Valencias and Common oranges will also be

somewhat lighter than last year.

Hawkesbury River.—Mandarins and oranges should be approximately the same as last year. Generally mandarins will undoubtedly be lighter in quantity than last season, in fact the total marketing in cases will be very light. On the other hand the quality and size will be better, and there should be nothing like the same proportion of very small and inferior mandarins that were on the market last year.

Navel Oranges.—Irrigation Navels will be slightly greater in number than last season. Coastal Navels approximately the same. Common oranges and Valencias will be generally lighter.

Glenorie.—Mr. F. A. Nicolson reports under date March 1st:—

Citrus.—Crop light to good, few favoured spots heavy; considerably short of last season's total. Common Oranges, light to medium. Navels, light. Valencias, medium. Mandarins, light to heavy on young trees.

Owing to very dry windy spring and early summer, the older orchards were badly cut up and dropped practically all the main crop. These trees have thrown a second crop, the bloom having appeared since the good rainfall in January. Younger trees have not suffered so badly, but even at this time, the main crop fruit is still falling.

At the moment the district looks very well, quite a contrast to the parched conditions prevailing at the New Year.

Passion Fruit.—There are favourable prospects for the winter crop.

SOUTH AUSTRALIA.

Ramco.—Mr. Jno. J. Odgers reports under date February 23.—

The citrus crop in this district this season is only light. Last year the crop was poor, not quite 3000 cases, and this season shows no improvement. The main varieties grown are Washington Navels and Valencia Late, with a few commons, mostly Mediterranean Sweet. In mandarins, Dancy and Beauty of Glen Retreat are chief favourites.

Ramco and Waikerie, originally two of the Village Settlements.—a Socialistic experiment of the Kingston Government—now form one irrigation area with a pumping plant at Waikerie. Mainly devoted to Vines, Apricots, and Peaches, there are one or two fine citrus orchards and most growers have a sprinkling of citrus. Last season about 30,000 cases of citrus went from the district, being only a little more than half of the preceding year, and this season prospects point to little increase on last.

AUSTRALIAN CONFERENCE OF FRUITGROWERS.

Hobart, April 28 to May 3.

The next Australian Conference of Fruitgrowers will be held at Hobart from April 28 to May 3 of this year, under the Presidency of the Hon. L. M. Shoobridge, M.L.C., of Tasmania. Delegates will attend from the several States, and meetings of the Pomological Committee will be held during the same week.

Apart from the Conference business, an interesting programme of trips has been arranged to the Huon and Derwent Valley districts, and visits to the works of Messrs. H. Jones & Co., the Risdon Zinc Co., and Cadbury's. A preliminary Agenda Paper has been prepared, and includes the following items:—

Preliminary Agenda.

1. National Advisory Fruit Council.

(a) "Larger representation on National Fruit Council for Apple-growers." (Tasmania.)

2. Export.

(a) "State control of export regulations." (Tasmania.)

(b) "That the Federal Government be requested to assist in financing experimental shipments either of new varieties to existing markets, or shipments to new markets overseas." (New South Wales.)

(c) "That the Government be asked to assist in financing export shipments of all fresh fruits overseas by the institution of some form of bounty or insurance." (New South Wales.)

(d) "Reduction of freight and cost of production." (Tasmania.)

(e) "Refrigeration and ventilation of the carriage of fruit." (Tasmania.)

(f) "U.S.A. Import Regulations: That the Government be urged to have the districts of this State known to be free from Fruit Fly included in the districts which may export fruit to the U.S.A." (New South Wales.)

(g) "Development of new markets."

3. Interstate Trade.

(a) "Interstate inspection fees." (Tasmania.)

(b) "Uniformity of fruit grading regulations relating to interstate and overseas fruit shipments." (Tasmania.)

4. Tariff Items.

(a) "Drawback on re-exported timber." (Tas.)

(b) "Tariff reform, as the present high tariff on the machinery, tools of trade, etc., of the primary producer is considered prejudicially affecting primary industries." (Tasmania.)

(c) "Cost of case material." (Tasmania.)

(d) "That the duty on imported Lemons be increased to 1½d. per lb." (South Australia.)

(e) "That strong recommendations be made to the Tariff Board for their sympathy and active support in bringing about a high protective tariff on Almonds; that it be raised to 7d. per

lb. on Almonds in the shell, and 10½d. per lb. on Almond kernels, on a par with the American Tariff." (South Australia.)

(f) "That the Federal Government be asked to reduce the import duty on soft wood cases in shooks." (South Australia.)

5. Citrus Fruits.

(a) "Importation of Citrus Fruits: That this Conference urges the total prohibition of the importation of citrus fruit and trees (excepting for propagation purposes under strict quarantine), owing to the danger of the introduction of further diseases." (New South Wales.)

(b) Immature citrus fruit. (New South Wales.)

6. Pests and Diseases.

(a) "Brown Spot: That the Government be requested to institute a thorough scientific investigation into Brown Spot of citrus and passions." (N.S.W.)

7. Uniform Fruit Case.

(a) "That the Standard Fruit Case Act be made uniform throughout the States in respect to the measurements and branding of the cases." (South Australia.)

8. Synthetic Cordials.

(a) "That the regulations in respect to the importation and manufacture of synthetic cordials be amended so as to protect cordials made from pure fruit juices." (South Australia.)

9. Advertising Fruit.

10. Plant Quarantine Station.

11. Report of Pomological Committee.

Further particulars may be obtained from the Hon. Secretary, Mr. R. E. Boardman, 9 Queen-street, Melbourne.

POMOLOGICAL CONFERENCE.

At the meeting of the Pomological Committee, the following subjects will be discussed:—

Certificates of Approval for Seedlings.

Fruit Tree Stocks.

Tomato Wilt.

Abbreviation of Names for Branding.

Fruits for Cannery, Drying and Jam Purposes.

Numbering of Export Cases.

Storage of Cases in Ship's Holds.

Sub-Committee Reports, etc.

Imperial Fruit Show.

At a meeting held at the British Ministry of Agriculture on January 7th, it was decided to organise an Imperial Fruit Show for 1924, to be held at the Bingley Hall, in Birmingham, between Oct. 24th and Nov. 1st inclusive. The Committee is to be reconstituted to include representatives of the fruit trade in Birmingham, and it is proposed to finance the Exhibition by the system of guarantees adopted last year. All further particulars can be obtained from the Secretary, Imperial Fruit Show Committee, 18, Bedford Square, London, W.C.1.

Flesh Collapse in Apples.

Valuable Cold Storage Experiments at Nelson, New Zealand, conducted by the Cawthron Institute.

Sturmers : Delicious : Jonathan — Picking at Correct Maturity Emphasised.

TO DISCOVER THE CAUSES OF flesh collapse in Apples, tests were recently made by Messrs. N. McClelland and L. W. Tiller at the Cawthron Institute, Nelson, New Zealand. The experiments involved the examination of some hundreds of cases of Apples.

The following is a progress report: Experiments were made with Sturmers to ascertain the influence of the following factors in inducing flesh collapse:—(a) Maturity, (b) soil, (c) packages, (d) delayed storage, (e) storage conditions, (f) carbon dioxide. Smaller experiments were made with Delicious and Jonathan Apples.

The effects of maturity and soil on Sturmers were examined. Apples were obtained from three orchards—(a) at Stoke, (b) on the Moutere Hills, (c) at Wakatu (all in the Nelson district), and from each orchard Apples at three stages of maturity were picked, as nearly as possible at comparable maturity.

The stages were (1) over mature, (2) mature (as generally considered suitable for cold storage), and (3) immature.

In one line—(c) Wakatu, over mature—it was found possible to obtain a comparison between fruit picked before and immediately after rain.

The results of the final examination in December, 1923, of Sturmers kept in one store are as follows:—

Percentage of Collapse.

These figures represent the percentage of flesh collapse in Sturmer Apples gathered at different stages of maturity from different districts:

Locality.	Over.	Immature.	Mature.
	Per cent.	Per cent.	Per cent.
Stoke—			
Bad ..	0	5	3
Slight ..	49	45	41
Moutere Hills—			
Bad ..	42	52	78
Slight ..	47	43	14
Wakatu—			
Bad ..	2	7	11
Slight ..	48	52	56
Picked after five days' rain—			
Bad ..		26	
Slight ..		56	

The figures for mature fruit from Store No. 2 are as below:—

Locality of Orchard.	Bad Per cent.	Slight Per cent.
A (Stoke)	1	17
B (Moutere Hills)	20	65
C (Wakatu)	2	36

Cases and Delay in Storage.

Two types of case were used—one boarded as closely as possible, and the other with wide spaces between the

pieces forming the top, bottom and sides of the cases; no difference was found in the amount of collapse in the two sets of cases.

Delayed storage of Sturmers caused an increase in the amount of collapse, as shown below; the results for two stores are given. Mature fruit from Wakatu was used for the experiments, and was kept in a cool, well-ventilated shed prior to storage.

Fruit from Store No. 1.

	Time kept out of Cool Store.		
	0 wks.	4 wks.	6 wks.
	Per cent.	Per cent.	Per cent.
Bad ..	5	25	41
Slight ..	52	51	47

Fruit from Store No. 3.

	Time kept out of Cool Store.		
	0 wks.	3 wks.	6 wks.
	P. cent.	P. cent.	P. cent.

	A. Mature Fruit—		
	16	29	61
	62	60	33
	B. Immature Fruit—		
	7	9	19
	50	56	54

The change occurring in the fruit on keeping out of cool store is probably not merely one of increasing maturity.

Storage Conditions.

The alterable storage conditions are:—(1) temperature, (2) humidity, and (3) ventilation. As the stores held Apples belonging to a number of orchardists, experiments under widely varied storage conditions could not be carried out.

In one store ventilation did not produce better results, except that scald decreased.

With regard to temperature, it is to be noted that at the same relative humidity, air at a higher temperature has a greater "picking-up" power for moisture than air at a lower temperature.

Careful experiments over several months showed that the temperatures as shown at the ends of the stores were no guide to the temperature of the bulk of the fruit.

Carbon Dioxide in the Stores.

Although there has never been experimental evidence to support the view, it has frequently been asserted that flesh collapse is largely due to the high concentration of the carbon dioxide emanating from the fruit in the atmosphere of the cool chambers. Determinations carried out throughout the season gave only 1.5 per cent. as the largest quantity of carbon dioxide in any part of any one of the stores. If we accept the view expressed in a report of the Department of Scientific and Industrial Research (England) that small quantities of

carbon dioxide act as a preservative, it would appear that the presence of this gas is a negligible factor in the three stores in which the experiments were carried out.

The percentage of carbon dioxide in close-boarded and open cases was found to be the same as in the atmosphere surrounding the cases. Careful analysis show that there is no "settling-out" of carbon dioxide within the stores—a fact which any chemist would have predicted. Where store ventilation has been practised the percentage of carbon dioxide has frequently been reduced to 0.1 per cent. Ventilation has perceptibly reduced scald injury, possibly because of the removal of esters from the circulating air.

Points for Orchardists.

Picking.—The matter of picking fruit at the proper maturity is important. The figures given show that differences exist between the keeping quality of fruit at different stages of maturity, but it is suggested that immature fruit should be picked with caution, as the market value may be detrimentally affected.

Next season most cool stores in the Nelson district will be run under conditions differing from those obtaining in previous years; these conditions may be more conducive to shrivelling; it would be wise for the grower to consider this point carefully.

Effects of Delayed Storage.

Delaying storage of Sturmers is dangerous, particularly as the sheds in which fruit is kept previous to storage are, in many cases, distinctly unsuitable.

The quality of fruit for cold storage is very important in that only sound fruit should be stored. Stalkless or insect-bitten Apples should not be stored; this applies particularly to the softer varieties.

The flesh collapse observations on Jonathan and Delicious Apples will be published later.

Jonathan and Delicious have developed a considerable amount of "ripe rot." This begins as a brownish spot on the skin, which, in its initial stages spoils the appearance of the fruit; from these spots the rot develops later. Ripe rot can be controlled by late spraying, and reduced by careful handling.

Appreciation.

Ravensworth, N.S.W., 9/2/24.
"I find the 'Fruit World' very valuable."

H.M.Y.

Successful Fruit Culture.

Apples, Pears, Apricots, Peaches and Prunes.

Varieties : Planting : Pruning : Spraying.

Useful Hints.

By R. G. Morphett, Kangarilla, South Australia.

IN DEALING WITH THE subject of successful fruit culture I propose to speak of apples, pears, apricots, peaches, and prunes," stated Mr. R. G. Morphett, President of the Kangarilla Branch of the Australian Bureau of Agriculture, in a recent address (published in the South Australian "Journal of Agriculture.")

In preparing the orchard, lay it out the way the ground can best be worked, and plant the trees diagonally. This will give about 20 trees more to the acre when planted 20ft. by 20ft. than when planted on the square, and another advantage is that the full distance is obtained three ways between the rows, whereas on the square only two ways can be worked.

Always secure the best varieties of trees from a firm upon whom you can depend, or, better still, select buds or grafts from trees that are good bearers, and send them to the firm from whom you intend purchasing the trees, and have them budded with your own buds.

It is not advisable to have too many varieties of the same sort of fruit, three or four at the most, and be sure to obtain the varieties that will suit your district. I suggest the following varieties for this locality.—

Apples.—Jonathan, King David, Dunn's, Cleopatra, Rome Beauty.

Apricots.—Late Moorpark, Royal. The Royal is a splendid canning variety.

Pears.—Duchess (Williams'), Packham's Triumph, Beurre Bosc, Winter Nelis.

Peaches.—Freestone, white flesh—Brigg's Red May, Royal George, Sea Eagle, Mountain Rose; freestone, yellow flesh—Elberta, Salway; clingstone, canning varieties—Sims, Pullar's, Liberty, Golden Queen.

Prunes.—D'Agen, Splendour, Prince Engelbert.

In pruning apples,

do not prune too hard when the trees are young. Only prune enough to keep the trees in shape; this will make them bear more quickly. Hard pruning means more growth and less fruit.

When the trees are bearing, prune each tree the way you find you can get the best results. Cleopatras are subject to bitter pit, and very little pruning is necessary. Top the trees as little as possible, for with topping and heavy pruning there is always a danger of the fruit becoming affected with bitter pit.

If the branches become too long they can be cut back to the main arm, and so assist the limbs in making a stout development, capable of bearing a good crop. Dunn's (or Munroe's) should be well pruned in the centre and the top well cut back, for this variety has a tendency to make straight growth. The trees bear a large crop in alternate years, and for that reason should be pruned somewhat heavily to save the limbs from breaking and spoiling the shape of the tree.

Rome Beauty is also inclined to make straight growth, and should be opened out in the centre even more than Dunn's, because the fruit does not ripen till late in the season.

The pruning of Jonathan and King David differs somewhat from the other varieties. They need heavier pruning, the trees should be well topped, and the small limbs in the centre of the trees where the fruit buds are some distance apart, should be spurred back to 3in. or 4in. in order to force the development of fruit buds. These two kinds are naturally open growing, and do not need much taken out of the centre of the tree. They are also rather small Apples, and if not kept well pruned the fruit will be too small for sale, and will be borne on the end of the limbs.

Apricots should be pruned

soon after the fruit is picked, care being taken not to start too soon, otherwise they will probably make fresh growth, and spoil to a certain extent the correct development of the fruit buds.

With summer pruning the top main leader should not be touched, but all water shoots should be removed, and the tree kept well open in the centre. The small limbs should not be pruned, or they will probably die.

By pruning in the summer the orchardist is able to proceed with the winter ploughing without any loss of time. All that is necessary in the winter is to top the leaders that are left.

Peach trees can be pruned on very much the same line as Apricots, only that they should be treated somewhat more heavily.

Pears usually make very straight growth, and for that reason it is necessary to keep the centre of the tree well opened out and cut back the long straight shoots. The small limbs in the centre should not be

pruned too heavily except when they are too long and when the buds are a long way apart.

The Duchess (Williams') is one of the best varieties of Pears for this district, and should only be pruned about every other year. Trees that are sickly and not making much growth should be pruned more heavily than the tree that is making strong growth.

See that the secateurs and other tools are sharp and clean, and all cuts made close to the bud which is on the outside. This will induce the tree to make an outward growth, while by cutting close to the bud there will not be so much dead wood to cut out.

The Importance of Spraying.

Spraying as a branch of fruitgrowing is not recognised as it should be. The commercial orchardist knows the important part spraying plays in the ordinary routine of orchard work, but it is the owner of the small orchard who is so often neglectful. He may not dispose of his fruit as a commercial proposition, but merely grows sufficient for home requirements, and for this reason considers spraying is not at all necessary.

Spraying, like most other essential things, requires the exercise of a little common sense.

For instance, to spray a tree regardless of the main points of a particular disease or pest will probably result in loss of time and money, and the grower will condemn the spray, whereas in reality he is, perhaps, to blame himself.

The pests of a fruit tree can be divided into two sections—fungi and insects.

A fungus is a form of plant life. One form throws out roots which enter the tissues of the leaves and break down the cells and utilise the sap, finally throwing out spores, by means of which the fungus is spread and carried on under suitable conditions.

It is evident, therefore, that to cope with such a fungoid disease any treatment to be used must be applied before an entrance has been made into the tissues of the plant. The treatment is preventive, not curative.

Spraying after the disease shows is no good, because the damage is done. Usually moisture and heat are required for the development of fungoid diseases, and the moisture they require is often their undoing, for at that time the moisture dissolves some of the spray material, and it is in this way that the spores are killed.

Bordeaux and Burgundy are well-known remedies. Bordeaux consists of a mixture of bluestone, lime, and water. It is essential to the

success of the spray

that good quick lime be used; the lime is to prevent the burning of the foliage by the bluestone. In the

Burgundy mixture soda is used in place of the lime. A fungicide should be applied in the late autumn, when the leaves have fallen. The wintering or resting spores, which are the reproductive cells of the disease, are then attacked, and for this reason a strong solution should be used.

The next spraying should be given when the buds begin to swell, when normal strength material should be used. It may be necessary to spray again when the fruit has formed.

Curl leaf of the Peach and Nectarine, and shot-hole and scab of the Apricot, can be treated in the same way.

Insects are of two kinds—chewing and sucking. The former eats the leaves, fruit, and shoots, and to effectively deal with them their food must be coated with a poison.

Arsenate of lead is the most efficacious spray for the purpose. Codlin moth and cut worms belong to this class.

The sucking insect is provided with a pointed hollow trunk, with which it pierces the tissues of the plant, and sucks the sap. Poison for this class of pest is no good; it must be destroyed by a spray or insecticide, which, coming into contact with the insect, burns its body or else covers its airholes and smothers it. Woolly aphid, peach aphid, and red spider come under this heading, and the most effective remedies are kerosene emulsion, red oil, resin wash, and lime sulphur.

Codlin Moth.—The damage this insect does is well known to Apple and Pear growers. It is a chewing insect, and is readily treated by timely applications of arsenate of lead. The first spraying should be done as soon as the petals fall from the flowers, care being taken to see that the calyx end of the forming fruit is well filled with spray. A second spray is necessary a fortnight later, followed by a third as the fruit develops.

Peach Aphid.—Spray as soon as you see them with kerosene emulsion or tobacco wash, and repeat the dose in a few days.

Woolly Aphid.—The spray for this pest must be driven with force right on to the aphid by holding the nozzle close to the affected part. The spray must go right through the woolly covering and on to the aphid to be effective. The sprays most effective are Black Leaf 40 and red oil.

Red spider is another pest the orchardist has to fight. It not only attacks Apples, but is very fond of Prune trees. Red oil sprayed at the rate of 4 galls. to 100 galls. of water in August before the trees shoot, followed by another spraying with lime sulphur, 1½ galls. to 100 galls. water, when the trees are in flower or when the spiders are on the move, I find very effective, and keeps the pest well in check. Never spray when the weather is wet or too hot; always choose a cool still day if the best results are desired."

Phylloxera Legislation in South Australia.

Vignerons Pay an Acreage Tax Towards a Reconstitution Fund.

IN VINEYARD districts throughout Australia, which are as yet free of the Phylloxera pest, the possibility of infestation is always present, necessitating constant vigilance.

South Australia—the principal vineyard State of Australia—is as yet free from Phylloxera.

In order to provide against the time when reconstitution on Phylloxera resistant stocks might become necessary the Phylloxera Act of South Australia was passed in 1899 at the request of the leading vignerons.

This law divided the State into six vinegrowing districts, and provided for the election by the vignerons of one member for each district. The Government was also empowered to appoint two members to the Board.

The franchise by which vignerons elect members is graduated. For possessing below one acre no vote is allowed, and an enfranchised elector can vote in one district only. Possession of from one to ten acres entitles a vigneron to one vote, two votes for from 10 to 25 acres of vines, and from 25 to 50 acres three votes, with one additional vote for every succeeding 50 acres. Elected members hold office for two years.

The Board declares the tax annually on the following basis—**Three-pence** per acre on all areas of one and above one acre of vines when they have been two years planted. **Sixpence** when planted from four to eight years, and

one shilling per acre

on all acres of vines over 8 years of age. Winemakers and distillers pay sixpence per ton tax on all tonnages of Grapes purchased. This money is collected by the Commissioner of Taxes and a small percentage charged for doing so.

The rates are handed to the Board, and they have been used until recently—(1) to form a Compensation Fund; (2) to pay vineyard inspectors, the secretary, and general working expenses of the Board. Members of the Board receive no salary, but only out of pocket travelling expenses, attending meetings two or three times each year. The compensation to be paid is to be paid on the actual assessed damage done in uprooting vines or destroying Grapes for the general good should Phylloxera appear in the plantations.

The Act empowers the Board to suspend the tax when £5,000 have been accumulated, but this figure has long since been exceeded.

An Amending Act was passed in 1911, which was largely a machinery Act, found necessary by experience to give fuller effect to the principal

measure. It contained a clause empowering the Board to uproot vineyards, which had been neglected for two years or upwards, and sue for the recovery of the cost.

Further, in reference to suspending the collection of rates, vineyards on which rates had been paid for 15 years were specially treated. It also made registration of ownership of all vineyards exceeding one acre, or increases or decreases of area under vines compulsory.

In 1922 a further amending Act was passed giving the Board power to utilise money from the rates to purchase vineyards or nurseries situated outside South Australia to raise resistant stocks, but not to bring them into South Australia without the permission of the Government.

The accumulated fund

has passed £20,000,

and the interest thereon and the rates now enable the Board to augment it by nearly £1,000 per annum after paying for the working of the Act. Of the accumulated fund the Government, at the suggestion of Mr. Quinn, Government Horticultural Instructor, who has been a member of the Board since its inception, insisted in the Act of 1922 that £18,000 be set aside to pay compensation should the necessity arise. This amount cannot be drawn upon for any other purpose by the members of the Board, who mostly favor compensation in kind, i.e., by supplying resistant stocks to owners of vineyards which may be at some time decimated by Phylloxera. It must be admitted that there are possibilities of some former contributors to the fund not wishing to replant their land with vines.

This Act of 1922 constituted the Murray Valley district into a new district within the Act.

The total rates in 1921 amounted to £2,201/6/3.

THE PRIMARY PRODUCERS' BANK.

The Primary Producers' Bank of Australia Limited is a comparatively new Bank, organised and controlled by the men on the land, who alone are its shareholders. It has an authorised capital of four millions, and every available penny of its funds will be devoted to the needs of Australia's primary producers. Long term loans will be an attraction of this Bank's policy, as also will be the sensible innovation of paying interest on all current accounts, and the "no charge" for keeping accounts. Thirty branches and agencies have already been established, and more are likely to be opened shortly.

Grapes for Export.

The importance of the Ohanez and Valensy Grapes.

Interesting Information.

MUCH APPRECIATION has been expressed relative to the interesting article on the Ohanez Grape, published in the last issue of the "Fruit World."

The importance of the Valensy Grape must, however, not be overlooked. This variety has been found to thrive under average Australian conditions suitable to viticulture. It is an excellent export grape, though not quite so tough-skinned as Ohanez.

Mr. F. de Castella, Victorian Government Viticulturist, states that he has frequently recommended planting Valensy in preference to Doradillo, as the former is heavy bearing, producing grapes suitable for the local market and export, as fresh fruit, also when dried it makes a first class raisin.

Continuing the theme of our last issue, the following interesting information is to hand from Mr. W. F. Flattley, Secretary of the Ohanez Grape Growers Association, Merbein West, Victoria.—

The Ohanez Grape was first planted in Merbein by Mr. R. G. Cameron about the year 1910 or 1911. He made one or two shipments to England prior to the War, with success. The War, however, interfered with his supplies of cork, and he shipped in wood wool, with disastrous results. For obvious reasons no further shipments were made during the War.

In 1920, however, Merbein growers got together and despite the high price of freights and material determined to test the English market. The Merbein District Ohanez Growers' Association was formed, and preparations made for a trial shipment. A heat wave, however, robbed us of our crops, and the project had to be abandoned. The following season, 1921-22, a parcel of 1500 cases was sent to England. The shipment was pooled and growers only just cleared expenses and got nothing for the fruit.

The following season, 1922-23, a smaller shipment was ventured upon. A parcel of 640 cases was shipped and brought a return on the London market which, although by no means gilt-edged, would have encouraged growers to have another try, had not all this profit been swallowed up in the disastrous American shipment.

After careful enquiry and assurances from both official and business sources that there was nothing to prevent Australian grapes from landing in U. S. A., a shipment of 500 cases was made to San Francisco.

Two days before the shipment arrived, the Californian State Agricultural Board informed our Agents that under an ancient Statute, which had been for years in desuetude, but which they had dug up for the purpose, they were empowered to prohibit the importation of fruit from any country in which in their opinion Mediterranean fruit fly existed.

Our fruit left here under a clean certificate from the Department of Agriculture, and a permit from the American Consul. Fruit fly was non-existent in Victoria, and even if it had existed here the long voyage at a low temperature in the vessel's chambers would have effectually destroyed the pest. But that did not

pockets to pay for cork, cases, packing expenses and fruit, a dead loss of about 13/- per case. As far as can be seen at present it is doubtful if we will be allowed to export this year.

We have no experience of the Valensy grape.

Crops are looking well locally, but are later than usual.

Packages and branding.

Mr. H. G. Colombie, of East Melbourne, Vic., writes under date March 11th, to the Editor of the "Fruit World."—

Congratulations on the most interesting article appearing in this month's "Fruit World."

Judging from past experience, I would strongly recommend Australian growers to adopt the $\frac{1}{2}$ barrel as their regular package. It is much more easily handled than the flat case and ullages are less frequent. Moreover, on comparison between Almerias, (packed in barrels,) and Lisbons (packed in cases,) there is no doubt, after taking due account of the



Picking Ohanez Grapes at Almeria, Spain.

matter. They were out to block our fruit, and they forbade it to land. They even forbade it being opened for inspection.

After some persuasion our Agents induced them to relax to the extent that they allowed the fruit to land provided it was loaded into trucks from vessel's slings, trucks sealed and despatched within 24 hours out of the State. We were called upon to guarantee freight and charges to New York.

When everything was wound up we found ourselves in debt to the shippers, and had to put our hands in our

difference in their carrying quality, that if properly packed, the barrel will keep grapes in good condition for a longer period than when packed in boxes.

In England, Ohanez Grapes from Almeria are often kept in ordinary warehouses for several weeks with little, or no loss at all in condition. Shipments of barrels and $\frac{1}{2}$ barrels are effected from the port of Almeria to almost all parts of the world, $\frac{1}{2}$ barrels being exported to most distant ports as ordinary cargo. The $\frac{1}{2}$ barrel usually weighs about 30 lbs. gross. The gross weight of 77 lbs. per barrel indicated in your article

is over estimated. The weight varies between 58 and 68 lbs. To make sure, I have studied quite a lot of the brokers' catalogs showing last season's results, and I should say that the average gross weight is from 62 to 64 lbs. It is important to remember that when packing in this style, no fruit should be packed that is in any way tender.

Branding.—

I think the quality of the Australian Ohanez Grape is good enough to stand on its own, and I would recommend that packages be branded.—

Australian Grapes

Ohanez Variety.

THE PORT OF LIVERPOOL.

Reservoir of the World's Products.

We acknowledge receipt of the "Liverpool Daily Post and Mercury" for January 14, 1924, with a special Supplement containing interesting articles on the Merseyside, its trade, shipping, marketing facilities, etc., and a few particulars regarding this great port may be of interest to our readers.

It is stated that whilst Britain may be regarded as the clearing house, Liverpool is undoubtedly the greatest reservoir of the world's products. But it is no stagnant pool: there is

which converge on the mouth of the Mersey.

Every description of commodity

finds storage on the Merseyside. During 1923 nearly three-quarters of Britain's imports from abroad were delivered direct from the ships into the warehouses to await consumption requirements.

The Port Authority

the capital liabilities of which in July last exceeded 30 million pounds, also provides accommodation for imported live stock, and in its shipbuilding and ship-repairing establishments, dry docks and graving docks, makes provision for a large number of ships



Vineyard at Almeria, Spain. Note the overhead wires on which the vine-branches are trained.

Photo kindly supplied by Barrett-Lennard Bros., Upper Swan, W.A.

They should not be branded "Almeria."

The Granulated Cork used in the packing should be of small granule.

The Jijona Fresh Grape Industry.

Jijona is, after Almeria, one of the most interesting of the localities where shipping Grapes are grown in south-eastern Spain. In addition to the Ohanez, another variety known as Valensy, is also cultivated. This has been proved at the Montpellier School to be identical with a variety which has long been known in the warmer parts of the south of France, under the name of Panse de Roquevaire.

not a single day of the year when inflow ceases, and the outflow is constant. During the twelve months ending 31st. December, 1923, there arrived in the Merseyside docks, by means of ocean and coastwise vessels, over seven million tons of various commodities, whilst over five million tons were despatched by the same agencies.

This movement required the services of many more than 10,000 vessels, both inward and outward, together with an almost incalculable number of express goods trains to and from all parts of Great Britain, an enormous fleet of road motor vehicles, and thousands of barges employed on the vast system of inland waterways

which require overhaul, repair or reconstruction. The value of the vessels which can be so accommodated at one time runs into many millions sterling.

The Merseyside is also the seat of the greatest manufacturing industries. In fact, it may be said that just as the products of the wide world are drawn to the Merseyside, there is not a town or village in the British Isles, and not a country or people upon which the sun rises and sets, which does not benefit by its amazing outflow of real wealth.



Dried Fruit Department

AUSTRALIAN DRIED FRUITS ASSOCIATION.

Report of Meeting.

Satisfactory Work Accomplished.

THE monthly meeting of the A.D.F.A. Board of Management, which took place in Melbourne at the Association Office, on the 26th of February.

The following information has been supplied by the Secretary:—

The recent death of Mr. A. E. Ross, one of the Board, cast a shadow over its deliberations, in view of that gentleman's long and intimate association with the Dried Fruit problem in the growers' interest. Letters were forwarded to intimate relatives of Mr. Ross, conveying the Board's deep regret in their sad bereavement. A resolution was passed placing on record the valued services rendered over a long period of years.

Crown Marks and Weights on Boxes.

This matter was dealt with, and instructions are to be issued to sheds, pointing out that the easiest and most effective way of branding for export under the altered conditions is to adopt, as a general principle—

"That, in branding boxes, it will be easier and better to add the crown and weight marks, if necessary, for Commonwealth trade, than to obliterate same, thereby disfiguring boxes."

Carton Packing.

After many interviews with Messrs. Turner, Kempson & Co. Pty. Ltd., an agreement was arrived at whereby this firm agrees to undertake the packing of the new A.D.F.A. Proprietary Carton in the 3d. and 6d. sizes in Grape, and 1lb. size in stone fruit, doing away with their own carton in these sizes now on the Melbourne market, and affiliating with the A.D.F.A., purchasing only Association fruit for such packing.

The Board, after much thought, believes this to be the most efficient and cheapest method of packing these small confectionery lines, at the same time allying to our interests a live business concern, with knowledge of, and considerable connection in this specialty line.

The Coastal Farmers' Co-operative Society Ltd.

A matter of importance to the industry, after prolonged negotiation, has advanced to the stage that the Coastal Farmers' Society have signified their intention to work under

A.D.F.A. conditions, and have made application to become A.D.F.A. Distributing Agents, and the application was granted to the Coastal Farmers' Society of Sydney. The furtherance of this matter to such a successful conclusion clearly indicated to all loyal A.D.F.A. members that their fellow growers of New South Wales are fully realising the advantages of organisation.

C.I.F. Sales to United Kingdom.

Messrs. Berry & Beaumont, of McClure, Valentine & Co., A.D.F.A. agents, interviewed the Board in relation to U.K. sales on a C.I.F. basis. The Chairman stated that it was not the Board's intention to place undue restriction on agents in London, regarding the conduct of business in that market, and it was felt that agents should be free to sell forward, or await the arrival of the fruit; in fact, to adopt whichever course was in the best interests of the grower, and met with the approval of the A.D.F.A. manager for the United Kingdom.

The following cable along these lines was sent to Mr. W. P. Caro in London—"Board has decided not to bind agents to fixed prices. All forward sales must be through agents' London representative. Essential consult frequently to conserve growers' interests."

An application from the Griffith Producers' Co-op. Co. Ltd., N.S.W., to become A.D.F.A. agents was granted. This matter carried further forward the N.S.W. situation, which, owing to the Chairman and Secretary's efforts, is a great strengthening of the A.D.F.A.

Testimonial to Mr. Chaffey.

Messrs. Sloan, Rawlings and Murdoch were entrusted with the task of procuring a suitable piece of plate to fulfil conference resolution in respect to Mr. Chaffey's Testimonial, funds for which have already been collected.

Facilities were given to agents under A.D.F.A. office control, whereby they can obtain sales of fruit for ships stores, a class of business we have hitherto missed, as our price was always beaten by the ship at some other port.

To further the active selling of the 1924 Season Fruit, it was resolved—"That in view of the impossibility of fixing export quotas at this date, agents be allowed to make reasonable shipments, pending the fixing of actual export proportions subsequently."

The Sterilisation of Fruit

is receiving further careful attention by the growers' representatives, and additional steps are being taken to achieve the A.D.F.A. objective, viz.—"Best graded dried fruits free of grubs."

A donation of £10/10/-. along with hearty thanks for services rendered, was made to the Mildura Vineyards Protection Board, who have recently been of great service to the Board in all growers' interests.

In view of the

lateness of the drying season in the River Districts, the Board found difficulty in deciding on a date to fix samples for the coming grading operations. It was ultimately decided that standard samples should be fixed at Mildura on Friday, March 21st.

A request received from agents to be supplied with a copy of minutes of all Board meetings was refused; it being pointed out that agents could get information per medium of their representatives on the Federal Council.

An interesting letter in regard to checking grub ravages in packed fruit was received from Mr. Connolly, of Renmark, who was thanked, and his idea is to be tried out.

The Raisin Bread Campaign was further reviewed, and the work of our special man in Melbourne has been the means of getting an additional 20 bakers to handle this line.

Dried Fruits Traders' Association, Adelaide.

The members comprising the group of firms that have formed this new company are the principal dealers in dried fruits outside the A.D.F.A.

The A.D.F.A. Board do not look upon the formation of this company as a more serious menace to the industry than the operations of the individual members in the past. The reason for such an association became apparent when these dealers in "outside" fruits found themselves competing, both in the prices offered to growers, and the selling prices of the fruits. Such competition is a small reflex of what the industry would be subjected to if there were no Growers' Association such as the A.D.F.A. to protect their interests.

The report that this Dried Fruit Traders' Association is claiming from the Government representation on the Fruit Advisory Board raises the interesting point—Do they represent

growers or traders, and, as an Association, are they prepared to stand up to their proper export quota?

Agents.

The following resolution was passed:—"That Board deprecate the action of certain agents in making direct statements to growers that finalisation of account sales has been retarded by the Board's decisions, the fact being that Conference laid down the principle that agents must equalise their export proportion before final account sales are issued. The Secretary's advices to agents have been of a nature to permit of a close approximate final statement to growers.

Grading.

Many requests have been received from packing sheds, particularly the small ones, that the Board should give definite instruction on the question of grading, but it was felt that this could not be done. The following Resolution was passed:—

"That small packing sheds be circularised as follows:—

"It is suggested that small sheds be informed that the old Crown system must be continued in classing fruit at the shed door, but, if there are clearly defined types (colour and size) occurring within these crowns, then if the fruit is to be exported it will be advantageous for the packer to brand same with a distinctive mark, leaving the crown mark off."

Fruits for Carton Packing.

As a guide to the sheds concerned, the Board required the fruits to be held for cartonning in the following proportions:—

Currants, 10 per cent.; Sultanas, 70 per cent.; Lexias, 20 per cent. of the tonnage of fruit allocated.

Council Meeting.

The Chairman announced that at present he thought it probable that he would call a meeting of the Council in May next.

Further reports on this subject will be found on page 189.

DRIED FRUIT WEEVILS.

How to Get Rid of Them.

The January issue of the "Journal of the Department of Agriculture" of the Union of South Africa contains the following useful note:—

One of the most effective ways of ridding dried fruits of weevils or any kind of grubs or maggots is to treat it with carbon bisulphide. This gas is a heavy vapour given off in evaporating the liquid of that name. The fruit is laid out in a mass in a gas-proof chamber, and the liquid placed in flat shallow containers upon the top of the fruit; it will gradually work its way through to the bottom, as it is heavier than air.

The liquid is highly inflammable, and as he gas becomes explosive when mixed with air, great care should be taken in keeping lights away from the building which is

being used to fumigate the fruit. Where the premises used are insured, the underwriters should be advised that this gas is being used. The gas does not injure food, fabrics, or metalware. About two gallons of carbon bisulphide are required for 1,000 cubic feet of space. The fruit may be left in the chamber overnight.

This gassing in no way freshens the fruit. It simply kills insect life. The further processing or freshening of the fruit is a different matter. This is usually done by passing the fruit through a steam trough till sufficiently softened, which is judged by the manipulator from his experience. Prunes and Raisins are sometimes dipped for some seconds in boiling water, to which a few ounces of glycerine have been added. The fruit must then be thoroughly dried before packing.

FRUIT FOR HEALTH.

A Doctor's Advice.

"If the population of the State (young children excepted) put into practice the suggestion of Mr. H. W. Clapp, Chairman of Commissioners, Victorian Railways, that each individual should eat half a pound of fruit a day, and thus dispose of Victoria's fruit crop locally, they will not only be performing a public service, but will be doing themselves much good."

The Melbourne "Herald," of March 12, quoted one well-known Collins-street practitioner, who offered gratis the slogan

"Fruit Forestalls Physic."

"As a general rule," he remarked, "people do not eat enough fruit. The action of fruit juices on the human internal mechanism is sometimes as good as a dose of medicine. Half a pound of fruit a day is not a great deal, even for the average child, to eat, and no harm, but much good, may result if care is observed that ripe and clean fruit is consumed."

"Fruit is a valuable medicine to children, provided it is good and ripe," declared Dr. R. Southby, medical superintendent of the Children's Hospital. "Some mothers, however, have extraordinary ideas on the subject, and offer their children fruit quite unsuited to their age.

"For instance, this hospital every year experiences an increase of very young patients coincident with the opening of the Cherry season. It is out of all reason to expect children under two to consume Cherries and not experience the after-effects.

"All stone fruits are a bit risky for young children, and care should be taken that the fruit is first peeled and stoned, and the flesh close to the stone socket removed."

Don't give lollies to the kiddies, as they spoil the teeth. Give them dried fruits (Raisins, Sultanas, etc.). The children like them better: they are cheaper, too, and much more healthful.

HORTICULTURAL RESEARCH BUREAU.

Important New Enterprise on Murrumbidgee Irrigation Areas.

Commencement Made with Citrus Research.

Bud Selection, Manures, Seepage.

The Murrumbidgee (N.S.W.) Irrigation Area Research Bureau, composed of settlers, together with a number of officers of the Irrigation Commission, acting in an honorary capacity, has for some time been endeavouring to have research work carried out on the Areas, with a view to solving local cultural problems. Recently, as a result of their representations, the Irrigation Commission appointed Mr. Eric S. West, B.Sc., as research officer, stationed at Griffith.

The Commonwealth Institute of Science and Industry has now agreed to subsidise the work to the extent of £1,000 per annum, which, added to the amount already allocated from commission funds for research work, will provide a sufficiently large sum to enable considerable scientific investigation to be effected. The commission has also agreed to set aside a suitable area, approximately 50 acres, at Griffith, for the purpose.

As the Commonwealth Institute has agreed to make £500 available immediately for the half-year ending in June, a special

Citrus Research Committee

has been formed, consisting of one representative of the commission, one from the Commonwealth Institute, and the third nominated by the settlers. This committee has already decided that the research officer should immediately prepare the land set aside by the commission for planting, and also establish a laboratory. As there are already suitable buildings on the site, this will take very little time.

In the meantime, work will be carried on to improve the quality and yield of citrus by bud selection, and to determine the most suitable stocks for the area, as it is known that the susceptibility of trees to such diseases as mal-de-gamma and gummosis depend largely on the stocks used.

Fertiliser and green manure experiments will also be carried out, as well as work to determine the best method of treating badly-drained and otherwise unsuitable lands. Alkali and seepage problems will also be studied.

Is this yours?

In December last we received a letter from one of our subscribers enclosing postal notes for 8/6, but the name of the sender was omitted. The postal notes were obtained from the Tweedvale Post-office, South Australia, the envelope bearing the same post-mark. We would be glad to hear further from the sender of the remittance.

Queensland.

THE FRUIT MARKETING ACT From the Fruitgrowers' Standpoint

With regard to the Fruit Marketing Organisation Act, a well known fruitgrower at Montville, Queensland, writes to the "Fruit World" as follows:— To thoroughly understand the feeling of the growers towards this new organisation, it will be necessary to review the various steps that preceded the Order-in-Council vesting the control of fruit in the Committee of Direction. As briefly as possible the situation is as follows.—

Early in 1923, Mr. McGregor, Director of the Council of Agriculture, in company with representatives of the Southern Queensland Fruit Society Ltd., visited the southern markets to study the problems confronting Queensland growers, and the result of these investigations was embodied in a pamphlet of a very comprehensive nature, setting out the findings and suggesting

a scheme of organisation
for the marketing of all Queensland fruits.

Copies of this pamphlet were despatched to every registered fruitgrower in the State, approx. 2,000. Those growers who had omitted to register under the Council of Agriculture organisation, did not receive a copy and had neither voice nor vote in the subsequent procedure. These disfranchised growers numbered approx. 1500.

It might be suggested that failure to register was due to lethargy and lack of interest in the agricultural organisation, and that grounds for complaint are not very well founded. While this undoubtedly applies in some cases, in the main, failure to register was due to the suspicion that the Council of Agriculture was not all that was claimed for it; that the organisation was political and that producers were being experimented upon for political purposes.

There can be no doubt that the plank in the Labour Party's platform "Production for use and not for profit," has been, and is a disturbing factor in the minds of producers, and the Council of Agriculture will not receive wholehearted support while the

suspicion of political control remains. The withdrawal of all Government nominees and the relinquishing of the chairmanship by the Minister for Agriculture should have a healthy effect, and I believe this is projected for the near future.

In all due justice to the representatives of the Government, it must be said that they have been of im-

mense assistance to the producers in the initial stages of the organisation, and in withdrawing, if such is the intention, they will have the satisfaction of knowing that they leave behind a firm foundation upon which the producers may, with just and skilful guidance erect a superstructure that must be of material assistance to producers generally.

So much depends upon the men in charge realising the truth that they are dealing with human nature with all its weaknesses and prejudices, that Rome was not built in a day, and that one faulty piece of workmanship, however small, endangers the whole structure. Remembering this they may advance with tactful and cautious steps, consolidating each position as it is attained before attempting any further objective. So may the Council of Agriculture rise to greatness. On the other hand, at the merest whisper or suspicion of bludgeon methods, the organisation so far completed will topple down in ruins.

The Scheme Ratified.

To return, however, to the pamphlet issued by the Director of the Council of Agriculture. Some time after registered growers had received these, Local Producers Associations were requested by the Council to hold meetings to discuss the scheme embodied in the pamphlet, preparatory to appointing a delegate to attend a conference of all fruitgrowing associations to be held in Brisbane under the auspices of the Council. This was done and a body of about 100 delegates assembled, ratified the scheme and the legislation necessary to give effect thereto, and appointed the

provisional Committee of Direction.

This meeting of delegates under the mesmeric influence, it is said, of Mr. McGregor, resolved that the fruitgrowers as a body should not be given the opportunity of a ballot to ascertain whether the majority favoured the scheme or not. Growers who were not registered and who consequently had no voice in the election of the delegates to the Brisbane Conference, sometimes referred to as "McGregor's Gathering," were not greatly alarmed by this since they believed that the policy of the Theodore Government would safeguard their interests and afford them

their individual right

of indicating by ballot whether they were prepared or not to hand over their business to the Committee of Direction.

Unfortunately the Government departed from its settled policy in the case of the fruitgrowers, and on the

advice of the State Fruit Advisory let, and which elected delegates to what has been described by the Minister for Agriculture as "the largest and most representative gathering of fruitgrowers ever held in this state," were a mere skeleton representation of fruitgrowers and that the Conference accordingly did not in any way reflect the opinion of the majority.

Later came

mass meetings of protest

at Stanthorpe and Montville simultaneously, growers passing resolutions requesting the Government to amend the Fruit Marketing Organisation Act to allow growers to exercise their right of ballot before the Act operated. These were followed later by similar meetings in every important fruit-growing centre, in the majority of cases resolutions of no confidence in the provisional Committee of Direction being carried by large majorities. A general feeling of

hostility to the Act

and the scheme embodied therein was abroad in fruit-growing centres, and the main reason for this was undoubtedly the (one might almost say furtive) manner of its initiation, and the fact that growers had been deprived of what they considered to be their constitutional right of determining in what manner they should conduct their own business.

The claims made in the press that the Local Producers Association meetings which endorsed Mr. McGregor's scheme and elected the conference delegates were merely

a skeleton representation,

are not without foundation. In the Board, the Fruit Standing Committee of the Council of Agriculture, the Directors of the Southern Queensland Fruit Society Ltd., and the provisional Committee of Direction, introduced late in the session the necessary legislation giving effect to the resolutions of the conference, and quickly passed it without giving growers the right of ballot, notwithstanding a strenuous endeavour made by both branches of the Opposition to secure an amendment to this effect and the repeated suggestion by members of the Country Party that it was extremely doubtful whether the scheme had the endorsement of the majority of the growers.

This Action of Government

in denying to the fruitgrowers the same right of ballot enjoyed by other industries, combined with the fact that such a large proportion of the growers had no part whatever in the deliberations preceding the legislation, caused an enormous amount of discontent throughout fruitgrowing districts, which simmered awhile without expression other than sporadic outbursts in the press from a number of centres.

These chiefly aimed at showing that the Local Producers Association meetings which considered the scheme embodied in Mr. McGregor's pamph-

case of the Local Producers Association in this district the position has not been overstated, for upon the first occasion of calling the Association together to consider the scheme, there was not a quorum of members present. At an adjourned meeting less than 25% of the fruitgrowers were present. The meeting was not entirely unanimous and definite mention was made of the necessity for a ballot, yet the delegate sent by the Association to the Conference was one of the foremost in endorsing the scheme and in advocating that no ballot be afforded his fellow growers.

The Scheme Launched.

Into a sea of discontent, not without justification, the Fruit Marketing Organisation Act was launched on the first of January of this year with the Provisional Committee of Direction at the helm. One would have expected that their first act would have been to pour oil upon the troubled waters while some details of organisation were being perfected.

On the contrary their initial actions in

limiting the selling agents

in what is stated to be an arbitrary manner, depriving growers of their right to sell on rails at their own loading stations, and the ill-advised method (or rather lack of method) of payments have made the waters rougher than ever, and at the time of writing it looks as though the Act would founder owing to the added discontent and the feeling of exasperation that has arisen in the minds of the Banana growers in consequence of these actions. [A conference has been held between the banana growers and the Committee of Direction to adjust, if possible, the points of disagreement, the result of which was apparently satisfactory to the banana growers.] If the Act weathers the present storm, what will be the attitude of growers towards it?

What the Growers are Doing.

It may be definitely stated that growers are more or less reconciled to the fact that they are in the marketing scheme for 3 years and that any active opposition will react to their own detriment; consequently they are making the best of what they consider to be a bad job, and are busy perfecting their local organisations, so that they may elect to the Sectional Group Committees in April next delegates in whom they have confidence and who will represent the opinion of the majority.

These Sectional Group Committees will appoint and act as advisers to the Committee of Direction and will frame its policy. The provisional Committee of Direction under present circumstances has no check upon it at all, and is responsible to nobody. The chaotic state of affairs at present prevailing in

the banana industry

is due to this cause, and the fact that the scheme was put into operation in

its entirety without a scrap of preliminary organisation. So far as growers are aware also, the Provisional Committee of Direction has no definite policy beyond the mere statement by Mr. McGregor that they are out to assist the growers. Neither this statement nor the scheme outlined in the pamphlet could possibly be regarded as a policy.

There are, of course, many ways in which assistance to the growers could give the scheme an appearance of temporary success, but

one way only exists

to make the scheme permanently successful. If the Provisional Committee of Direction merely uses its powers to wrest a few more shillings for the grower (and its actions up to date in imposing licenses on fruit vendors, in fixing a minimum price for pines, and restricting supplies to maintain prices rather than enlarging markets, would lead one to suppose such to be the case,) then the scheme must ultimately fail, even though all the growers are behind it; but should the policy be to save a few more shillings to the consumer then nothing but folly in management can prevent the scheme from being successful even without a majority of growers behind it.

The Path to Permanent Success.

In the former case it is possible to carry on with apparent success for some time, the extent of the ultimate crash being in direct ratio to the time carried on; while the latter case would no doubt involve a period of apparent failure before any symptoms of success were manifest.

Are the members of the Provisional Committee of Direction opportunists or are they statesmen? Will they seek a bubble popularity by making a great display for a little time, or have they the courage to take the path that apparently leads to failure, incurring perhaps the odium of friends and foes alike, so that there may eventually emerge a marketing scheme with a stable and economic foundation to endure for all time.

The more thoughtful of the growers in this district are alive to the fact that

the interests of the producer

are bound up in those of the consumer and that only by directing the powers they have been given to further the interests of the consumer, can the producers' own interests be permanently conserved and enlarged.

There is not wanting a proportion of optimistic souls whose vision is dazzled by a golden prospect, and who think that the Committee of Direction with one wave of its magic wand will create a new heaven and a new earth for fruitgrowers.

On the other hand the serious minded grower predominates, and naturally incurs the title to pessimist, for he realises that the road to success is

fraught with great perils and is likewise hard and uncharitable; he sees also that the consequences of failure will be disastrous. Can the fruit-growers find

the men for the job

in the short time at their disposal for organisation?

The Sectional Group Committees as the electors of the Committee of Direction and the framers of that body's policy will need to consist of the thinking men of the industry. So far as the Committee of Direction is concerned, it should be obvious to even the optimistic souls referred to, that the grower is not the logical person to conduct the distribution of his own produce, though he may under special circumstances only conduct the sale thereof.

Selling and distributing

have been for ages past specialised lines of business, and while an Act of Parliament may confer upon the grower the power, it cannot endow him with the ability to sell and distribute on an economic basis. When all is said and done, the grower must remain the grower, despite the enormous powers he has been given, and this fact must be clearly comprehended. If he sets himself up to be a business or financial expert, or a selling and distributing agent, he will in all probability fail, not only in these departments, but as a grower as well. It seems logical therefore, that the Committee of Direction should embrace

representatives from the three branches

of the industry—growing, selling and distributing. The machinery for the working of the Act is available but not assembled. Here then lies the task ready to the hand of the Sectional Group Committees, and growers will rest more easy in their minds after these bodies are constituted.

In Conclusion

it may be said that the majority of growers regard the powers conferred upon them as a grave responsibility, and are sensible that the problems confronting them must be approached with extreme caution and wise diplomacy. The present hostility seems to be directed rather towards the Provisional Committee of Direction personally, than towards

the idea of organisation,

though it must be stated that the coercive nature of the whole business rankles in the mind of the most peaceful grower. This hostility should diminish if no further fuel is supplied by the Provisional Committee of Direction, and should practically cease after the elections for Sectional Group Committees. Growers will then, I think, get behind their leaders and endeavor to make the organisation a logical and economic success.

Queensland Fruit Marketing Act.

Is it Legal?

A North Coast Fruitgrower writes under date March 10th.—

Every day there are fresh complaints from growers regarding the Queensland Fruit Marketing Organisation Act. It is proposed to obtain the best legal advice to test the right or power of the Committee of Direction to control fruit outside this State against growers wishes.

Stanthorpe Annual Show.

A Record Exhibition.

The Annual Show conducted by the Stanthorpe Agricultural Society last month proved to be the best ever held. Additional accommodation was provided for exhibits, and the number of entries received was a distinct improvement on previous years, the total number of entries for this year being 1935, as against 1607 for last year, and 1831 for 1922. Great credit was felt to be due to this year's President, Mr. A. G. Glover, for the way in which he had toured the district in the interests of the society, missing no opportunity of putting forward its claims, and also for his yeoman service in looking after visitors to the show.

The Opening.

After an inspection of the exhibits, the official opening was performed by the Governor, Sir Matthew Nathan, who referred in appreciative terms to the co-operative packing shed established at Bapaume by returned soldiers, particularly to the high quality of the tomato pack turned out there. He strongly urged growers to refrain from forwarding fruit which was in an immature condition. The success of the Fruit Marketing Act would depend on the assistance it received from the growers. He trusted that the combined efforts of the entomologists and growers would materially reduce the losses caused by the fruit fly and other serious pests.

The District Exhibits.

The greatest feature of the Show was the display of District Exhibits, which were staged in the new Nathan Hall. The judges, Messrs Chilton and Rowlands, allocated the points and prizes as follows.—

The Summit, 455 points	1
Broadwater, 360 points	2
Thulimbah, 311 points	3
Ballandean, 297 points	4
Eukey, 238 points	5

Comparing the merits of the respective district collections there was no doubt that The Summit won because of the greater variety of the display, and the better arrangement of the exhibit; but all districts which exhibited did well.

Praise from the Fruit Judge.

Mr. F. Chilton, the judge of the fruit, who is regarded as one of the finest judges of fruit in Australia, said that the show was the best he had ever been at in the Commonwealth. The plums and peaches were excellent, while the apples were very

good, especially considering the season was a little early. He complimented the district on the absence of disease, pointing out that throughout the whole of the judging only two single specimens contained disease.

The quality of the exhibits in all sections was high, and the prizes were well contested. The gate takings for the two days amounted to £281/13/6.

SEASONABLE ORCHARD NOTES.

Useful Hints.

Fruit picking will have been completed except for a few very late varieties; even late sorts do better on the shelf than exposed to rain and frost (writes Mr. C. H. Beaumont, Fruit Inspector in South Australian "Journal of Agriculture.") Do not forget to have the trees you intend to work from marked, so that pruners will leave the necessary wood. It is only by studying your trees that the best results are possible, and only wood or buds from good type trees should be used for propagating purposes.

Clear up all windfalls; vinegar makers will purchase them, or they may be used to feed stock. If left on the ground to rot they help to increase fungus troubles.

If you are intending to plant Oranges or Lemons, it is quite time they were attended to. It is good to put a screen over newly-planted trees to help them over the frosty season. A bran bag fixed to stakes, so that the tree is protected from the rising sun, shading one side and the top, will be very effective. Have your trees fumigated before they leave the nursery, so as to kill all scale pests. Also, see that the soil about the tree is free from weeds.

Cut away all low growth from the citrus trees where brown rot is feared, and have the ground under the trees in grass or crop of some sort, or else have a heavy mulch of pea straw or other material.

If you are adding to the orchard you will have ordered the trees before this. Get the land worked, and holes opened as early as possible, so as to be ready to take the trees as the nurseryman can lift them.

Do not forget to spray all established trees which were very badly affected by fungus pests with Bordeaux Mixture.

If you intend to graft any trees or vines this season, mark those from which you wish to get your scions. Careful selection will mean much to you in the future profits.

When you are about to prune, keep all the diseased trees and vines until the last, and burn the cuttings on the spot. Carefully boil the secateurs or dip in formalin before again using.

When pruning, if you are in doubt about cutting out limbs, etc., leave them. Remember that it takes years to grow a good limb; it is better to err on the side of too little pruning than to overdo it, especially in trees in bearing.

PASSION FRUIT CULTURE:

Seed Sowing: Cultivation: Pruning.

Passion-fruit plants are readily raised from seeds taken from good quality fruits, or they may be purchased from most nurserymen, says the Government Horticultural Instructor (Mr. Geo. Quinn).

They are warmth-loving plants, therefore the seeds should be cleaned of pulp and sown in early autumn or spring, whilst the ground and atmosphere are warm.

They are sown in boxes or in a prepared seed-bed, made of about one part well-decayed organic manure or leafmould, one part sand, and one part garden loam, well-pulverised and mixed. The surface of the bed or box should be levelled and flattened fairly firmly on the surface before the seeds are sown. When sown about 1 inch or more apart, press them into the soil; then cover them half-an-inch deep with a sprinkling of sifted rotted manure and sand mixture. Water them with a finely-rosed watercan and stand in a warm but sunny spot. Keep the soil moist, but not at all sodden. The seed-bed or box may be covered over and kept dark until the seeds peep through. When the plants are 2 inches or 3 inches high, pot them off into small pots or tins, using good rich soil of a similar character to that in the seed bed. After being grown a few inches higher, and hardened off by exposure to light, the plants may be set out in the garden.

The position for these plants should be one where severe frosts are not experienced, and the soil should be loose and deep, rich in organic matter, and capable of retaining moisture during the hot weather.

The plants may be trained on wire fences, but if only a few are grown, they do well against wooden or stone walls, but wire or wire-netting is essential to support them against such upright surfaces.

The soil must be well drained and stirred frequently on the surface with a hoe or fork, but not deep enough to damage the roots. If planted in a locality wherein the hot season is also a dry season, the Passion vines must be irrigated. They thrive best in climates wherein the rain falls during the summer season, but also do well under irrigation.

If the plants are thriving a few fruits are usually borne after one year's growth has taken place, and the crop increases from then on.

When grown in the open on fences, the plants reach their maximum in about three seasons, and usually begin to decline after about five years; but when set against protected walls, they often last many years longer. The pruning usually applied consists of cutting out the exhausted shoots only, but attention to tying up new shoots is desirable at most times.

Fruitgrowing Under Irrigation

Drying Operations: A New Dehydrator: Cultural Notes.

(By Our Special Correspondent.)

THE GENERAL TOPICS under discussion in the Murray Valley during the last few weeks have been the Fruit Fly and the weather.

Growers generally condemn the alarmist's reports that the Fruit Fly will sound the death-knell of the fruit industrv, and especially so where the dried fruit industry is carried on. One has only to look around and consider the fruit industries in those States and countries in which the Fruit Fly is known to have been for years past, to see that the doom predicted is in no sense likely to come to pass.

The Fruit Fly

is one of the worst of the orchard pests, and the eradication of it in Victoria and at Curlwaa, N.S.W., is sincerely hoped for by all right thinking persons.

The growers of Mildura are to be congratulated for the spirit in which they attacked the heart-breaking work of destroying the host fruits of the Mediterranean Fruit Fly. The task tackled by the horticultural staff of Victoria was not an easy, nor a pleasant one, and the officers have carried out their duties with much patience, tact, and thoroughness.

The fruitgrowers lower down the river, on the South Australian irrigation areas, viewed with some concern the outbreak at Mildura and Curlwaa, but after learning of the methods being adopted for the destruction of the pest, breathed somewhat more freely.

Drying Operations.

Owing to the cool changeable weather experienced during the summer the ripening of the fruit has been somewhat erratic and prolonged. Currents have ripened very unevenly—black, red and green berries, fully matured, have been found on many bunches. The development of the sugar has in many cases been retarded to such a degree that some growers have left off picking the Currants and commenced gathering the Sultanas, which appear to have developed more evenly, though much later than usual.

By the end of March most of the Grape fruits in normal years have been dried, but this season picking operations of the Sultanas and Gordo will extend well into April in some instances. Should the weather conditions remain warm, drying will go on satisfactorily, but in the event of early rains and an early break up of the summer, the drying operations will be somewhat protracted. In fact, great difficulty will be experi-

enced in getting the final pickings of fruit sufficiently dry for stemming and packing.

The old growers

will be wise to the fact that fruit left uncovered during dewynights will take up moisture, and the fruit will go back; that is, moisture will be dried out during the warm day, but the fruit will be as wet again the following morning through absorption of moisture from the air at night. Every precaution to prevent this re-absorption of moisture should be carried out; if the Raisins are spread out on wooden trays they should be stacked each night. Racks which have not permanent roofs should have the top covers placed on each evening and removed in the mornings.

Quality of the Fruits.

Early in the season some of the Sultanas berries were scorched by a heat burst; and the damage in some cases was believed to be fairly heavy. As picking proceeds, the damage by sun scald is found to be far less than was first thought; in fact, on the whole, there are probably less burnt berries than usual. The burning occurred so early in the season that scorched berries have dried up and will blow out during the grading and stemming operations.

Should suitable drying weather continue the sample of Sultanas this season will, on the whole, be the best yet produced in the irrigation areas. Our Sultanas are equal to any, and superior to most in normal seasons, so that provided grading and packing is of a high standard, there should be no complaints.

The Gordo fruits

are processed after the Sultanas Grapes have been treated. The quality of these Raisins promises well, as there are less burnt berries than usual. The fruit has filled out well during the cool weather, though ripening has been delayed, consequently drying operations will be prolonged.

There has been erected a Dehydrator on the State Experiment Orchard, Berri, South Australia, for the purpose of experimenting with the artificial means of fruit drying.

The machine, which holds two tons of fresh fruit, has been designed and erected by Messrs. Alwin Fisher Ltd., of North Adelaide. Growers naturally are keenly interested in the dehydrator, especially as the season has not been the best for sun drying of fruits. Interesting data should be forthcoming as to the quality, cost of handling, and drying of fruit compared with the sun-drying process.

Cultural Operations.

AS THE AUTUMN approaches there is not the necessity to keep the orchards spick and span, and free from weeds. Where cover crops have not been sown, the growth of weeds may be encouraged, as when they are turned under the humus content of the soil is augmented. The weeds, like other green manure crops, must be turned in while they are still green and succulent, as they decay readily at that stage of growth.

Lime and gypsum should be spread over stiff clay lands during the autumn. These soil ameliorators should be applied at the rate of 1 to 3 tons per acre. They are spread over the surface of the land and left exposed, the rain taking them down through the soil.

Heavy soils are not only made friable and easy to work, but the dormant potassium salts are rendered available to plant life.

Land that is to be planted during the coming winter and spring months should be prepared early and prepared well. All stumps, roots and stones should be removed for a depth of 18 inches. The land should be deeply ploughed, and, where possible, sub-soiled to a depth of 15 to 18 inches. Sub-soiling is essential where the land is inclined to be a little hard, especially where the sub-soil is of a clayey nature. In light open sand the sub-soiling is not as important.

After being broken up the soil should lie idle for some little time to allow of thorough aeration and sweetening of the land before planting.

South Australia.

S.A. GRAPE GROWERS.

Position of the Industry.

A large and representative meeting of Grapegrowers was held in the Sturt Institute (South Australia) on March 4th, Mr. G. H. Parsons presiding, when a report was received from the Executive with regard to the position of the Grapegrowing industry.

Mr. C. T. Fisher, (ex-President of the Central Association) stated that the exorbitant excise duties reflected on the value of Grapes to such an extent as to place the industry in a parlous position. The excise duty on brandy was equal to £40 per ton on Grapes. The Federal Government thus collected £40 revenue, less collection expenses, from the finished product, whereas the grower collected not more than £6 per ton, and generally £5 per ton, on the raw product, which cost him from £6 to £7 per ton to produce. The Committee had placed the matter before the State Government, which willingly offered

to support the growers in the application to the Federal authorities for relief.

The Tariff Board was considering ways and means for assisting the Grapegrowers, and if a reduction in the excise duty was made, provision was to be made that the growers would receive the direct benefit. On this point the Federal Government was with the growers. If the excise duty on brandy was reduced 4/- per gallon the grower should get a direct benefit of £3 per ton on Grapes.

A telegram was received from the chairman of the Tariff Board in Melbourne asking the growers to send a delegate to a conference of wine-makers, distillers and growers with a view to endeavouring to fix a minimum payable price for Grapes, and members were urged not to sell at prices which did not show a profit.

The following prices were considered the minimum under which Grapes could be grown in the district:—Doradillos, £6; Muscatels, £8/10/-; Grenache and Mataro, £9; Shiraz and Pedro, £10 per ton in the vineyard, plus 10/- per ton for average delivery.

Downy Mildew in South Australia.

The efforts made by the Horticultural Branch of the Department of Agriculture to check the spread of downy mildew in South Australia are meeting with success, states the "Garden and Field." Vinegrowers in all parts of the State are awakening to a sense of the serious nature of the disease, and are giving better attention than hitherto to the Department's advice re the need for continuous spraying during the growing period. Personal inspections have been made by Departmental officers, and information respecting the disease and its treatment has been circulating by means of an illustrated pamphlet prepared by Mr. G. Quinn, Horticultural Instructor.

"Grapes that are still in the hard, green stage are the most susceptible to injury," said the Horticultural Instructor, "and where growers have reason to suspect an outbreak of the disease, they would do well immediately to spray their vines with Bordeaux mixture as a preventive measure."

Downy mildew has been in evidence at McLaren Vale, but recent weather conditions have not favoured its development, and there is no reason to believe that it will affect the Grape crop to any appreciable extent.

THE STANDARD FRUIT CASE ACT.

Partial Suspension in South Australia.

Strong criticisms have been made in the Adelaide press concerning the enforcement of the Standard Case Act, which was attempted in the market by inspectors under instructions from the Agricultural Department, and as a result the Minister of Agriculture invited representatives of the Fruitgrowers' Association to meet

him and explain the growers' grievance.

The position was explained by the President and Secretary, and the Minister was most fair and reasonable, stating that it was not the intention of the Government to harass the producer in any way. Subsequently the Standard Case Act was suspended as to second-hand cases, but will be enforced with respect to new cases. The modification should work satisfactorily, and growers feel that they have found a friend in the present Minister of Agriculture. Feeling against the Act had worked up to a high pitch, but moderation on the part of the Minister and the Fruitgrowers' Executive has smoothed away the difficulty, and the growers are realising the strength they have acquired through organisation.

Sturt Fruit Show.

The fourth Annual Fruit Show of the Sturt, Marion and Edwardstown Branch of the S.A. Fruitgrowers' and Market Gardeners' Association was held in the Sturt Institute on March 8, and was a pronounced success.

Mr. E. Anthony, M.P., who opened the Show, congratulated the committee on their efforts, and referred to the importance of the fruit industry to the State. The official luncheon was presided over by Mr. F. H. Edwards, in the absence of the President (Mr. G. H. Parsons) who was indisposed. Monetary prizes were awarded this year, and the number of entries was consequently substantially increased, while the judges commented upon the excellence of the exhibits staged.

Cherry Stocks and Apple Tests at Blackwood Experimental Orchard.

Mr. R. Fowler, Manager of the Government Experimental Orchard, Blackwood, S.A., in response to an enquiry, writes that experiments have been made with regard to Cherry stocks, and Mr. Quinn (Government Horticultural Instructor) proposes to publish a bulletin on the subject. He also states:—

"Just at present we are very busy picking and recording our various Apple tests, manure, tillage, bitter pit, etc. We have a heavy crop of Apples and Pears, most varieties in our collections being loaded with fruit."

HINTS FROM ABROAD.

Mr. C. H. Beaumont, a district Orchard Inspector of the South Australian Department of Agriculture, who recently visited California on his long leave at his own expense, and has now returned, has given an interesting account of his experiences.

In New Zealand he states the bulk of the fruit trade in Auckland is in the hands of the Chinese. In order to check the woolly aphid and Peach aphid there the authorities bred an

insect (*Aphelinus Mali*) which proved effective.

In British Columbia, continued Mr. Beaumont, the Apples were beautifully colored, and the system of grading carried out to perfection. Many of these Apples went to New Zealand.

At Los Angeles, in California, the road passed through 50 miles of Orangeries under irrigation: there was a special college for the study of citrus trees.

Smudge pots were out ready for frosts, and alarm thermometers gave the warning.

One vineyard contained 35,000 acres. The road ran through 15 miles of Walnuts. The marvellously complete system of machinery for dealing with dried fruits prevented the introduction of pests. The fruit was passed through a good heat, and put away hot, and sealed, so that no moth could touch it.

One plantation of Figs contained 2,000 acres of one variety for canning purposes. At the Fresno packing sheds 2,500 hands were employed, the output being 235,000 tons of Raisins. At San Jose 90,000 tons of Prunes, mostly d'Agén, were turned out in the 1922 season.

FRUIT PRICES.

Enlightening Growers.

The Annual Meeting of the Central Branch of the South Australian Fruitgrowers' Association was held on February 29th, the President (Mr. A. O. Peterson) presiding. In his report, the Chairman stated that he considered that Apple and Pear growers should be better organised. He knew of instances where growers sold their Pears at 4/- per case, while the factories, through the pool, were paying from 4/6 to 5/- per case.

A large quantity of export Apples also were sold at 3/- per case, when they were really worth more. In future something should be done in the way of calling meetings of Apple growers to discuss prospects of prices and values of Apples, and endeavour to enlighten the growers on the actual value of their fruit before they made sales.

After its three and a half years of waiting, Monash, one of the River Murray soldier settlements, has produced its first fruit crop. "The Murray Pioneer" remarks that most of the settlers are now busy with their Currants, and some very good samples of fruit are to be seen. Lone Gum settlers are further advanced, and their picking teams are hard at it.

Phylloxera Resistant Stocks.

It is reported that the South Australian Phylloxera Board has purchased 60 acres of the Howlong (New South Wales) Viticultural Station, with the object of raising phylloxera resistant vine stocks in case of an outbreak of Phylloxera in South Australia.

Export of Peaches.

Successful Shipment to England.

Peaches Selling at 1/6 to 2/- Each.

Some considerable time has elapsed since the "Fruit World" first drew attention to the possibilities of exporting Australian Peaches to Europe, and in our issue of May, 1923, the following statement was made on the authority of Mr. A. Smith, one of the Cambridge scientists who visited Australia last season:—

"The opinion is firmly held that it should be possible to ship commercial quantities of Peaches and other soft fruit from Australia to England. This matter, of course, needs close investigation, but the fact that such an opinion is held is of the highest importance, and not only justifies but demands further experiments along these lines."

In an experimental shipment of Peaches sent last season and carried at a temperature of 33 degrees, the fruit arrived in firm condition, but on tasting it proved flavourless, it being assumed that the Peaches had been carried at too low a temperature or that the fruit was subjected to excessive pre-cooling before shipment.

This season an effort has been made to ship Peaches on a commercial scale, and the first consignment of 710 cases of the Zerbe variety was forwarded by the "Orvieto." This fruit arrived in London in excellent condition, and sold at 1/6 and 2/- per Peach. The whole experiment was most satisfactory, and reflected the greatest credit on the Agricultural Department, particularly Mr. D. B. Adam, B.Ag.Sc., who was practically devoting his whole energies to solving this question of transport.

A further shipment has now been forwarded by the s.s. "Esperance Bay," 400 cases of "Smith's Seedling" being on account of Messrs. John Cooke & Co., and 50 cases by the State Government for experimental purposes. The Government quota was made up of several varieties, including Catherine Anne, Belot's Seedling, and Elberta, and on the results obtained by this experimental shipment may depend the extent to which the trade can be developed in future.

The question of the temperature at which this trial consignment should be carried was discussed by Mr. Adam with Mr. Cross, chief engineer of the "Esperance Bay" and it was decided the range should vary from 35 degrees to 33 degrees, this temperature having yielded the best results in land cold storage.

The style of packing is similar to that so successfully adopted in the shipping of Peaches and Plums from South Africa, trays being used, each containing 24 to 30 Peaches, each fruit being firmly placed in a nest of wood wool. The Peaches were pre-cooled and sent to the ship's side in iced trucks.

VICTORIAN CITRUS ASSOCIATION AND MELBOURNE AGENTS.

With reference to the abridged report published last issue relative to the interview between members of the Melbourne Wholesale Fruit Merchants' Association and the Conference of the Victorian Central Citrus Association, we have been asked to publish a more complete statement. Same is as follows:—

Messrs. Davis (President), Wade and Wilson, of the Wholesale Fruit Merchants' Association, attended the Citrus Conference by request. On the delegation entering the Conference-room they were introduced by the Secretary of the V.C.C.A., Mr. B. S. B. Cook, and asked to place their views before Conference.

The representatives of the merchants stated they would like to hear what growers had to say.

Mr. G. Mussen said that the effective basis of discussion would be that the commission should be 7½ per cent. (similar to Sydney and Brisbane),

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ORANGES, BANANAS, PINES and
all other fruits.

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and that duplicate account sales should be furnished by the agents.

Mr. Davis replied that efficient service could not be rendered on less than 10 per cent. commission.

Mr. Grant (Tresco) said that in view of the organisation of district packing sheds the commission of 7½ per cent. seemed ample.

Mr. Wade remarked that in addition to the commission of 7½ per cent. in Sydney, the cartage and other charges increased the cost to growers to from 9½ to 10½ per cent. He deplored the report in the press that the agents were fighting the growers, as such was not the case.

Mr. Wilson said it was the earnest desire of the agents to work in harmony with the growers, as they had been doing for years past.

Major Hallard (N.S.W.) and Messrs. Frazer Gandie (Vic.) and Parkes (S.A.) contributed to the discussion.

No progress was made, however, on the main point, viz., the amount to be charged as commission, and the deputation withdrew.

Western Australia.

New Fruit Grading Regulations.

The first shipment of Apples and Pears to be dealt with under the new fruit grading regulations of the Customs and Commerce Trade Descriptions Act of Western Australia was despatched from Fremantle by the s.s. "Demosthenes" towards the end of February.

In view of the regulations being new to growers and packers, the Chief State Supervising Officer (Mr. G. W. Wickens) personally inspected a quantity of the fruit, and found that considerable misconception evidently existed with regard to the regulations. In every instance growers had branded the whole line as being of the same grade; if one case from an orchard was marked "special" all the cases from that orchard were marked "special"; if one case was marked "standard" all from that orchard were marked "standard," when it was quite apparent that all were not of the same quality. This meant a considerable delay in having the cases rebranded on the wharf.

The fruit for the "Demosthenes" was, on the whole, of "standard" quality, only a few consignments ranking as "special." Mistakes were also made in regard to the sizes stencilled on the cases. Evidently the new regulations will take some time to be thoroughly understood.

Mr. Wickens stated that no "blemished" Apples would be shipped from Western Australia this season, as the growers were totally opposed to placing inferior fruit on the London market.

Apple Season in Full Swing.

Perth (24/3/24).

The Western Australian export Apple season is very satisfactory. Last year the exports from the State represented 355,850 cases, and this quantity should be exceeded this year. The "Demosthenes" lifted 2,912 cases on February 27, and the "Esperance Bay" took 24,424 cases of fruit, the bulk of which was Apples, and the "Anchises" has taken on board from 10,000 to 11,000 cases of Apples at Albany. On March 10 the "Boorara" called at Bunbury to lift 25,000 cases.

The representative of Manchester Consignments Ltd. advised that the "Ayrshire" would call on March 24 to load fruit and other cargo, and will proceed direct to Manchester. Two other boats of the Scottish Shire line—the "Argyleshire" and the "Berwickshire"—are listed to follow at intervals of about three weeks or a month, thus affording favourable opportunities for direct shipment to Manchester, where there is a consuming population of over 14,000,000 people within a radius of 75 miles.

Commercial News.

Items of Interest: Legal Decisions.

THE JAM INDUSTRY.

Tasmanian Dispute Settled.

The dispute between the Amalgamated Food Preserving Employees' Union and the employers in the jam, canning, sauce and pickle industry was brought to an end early in March by a temporary agreement, which was arrived at during a conference conducted by Sir John Quick, deputy president of the Arbitration Court.

The chief terms of the agreement are as follows: Increase in the basic wage for male adults from £4/4/- in Victoria, and £4/3/- in New South Wales, South Australia and Tasmania to £4/7/- per week; increase in the basic wage for female adults from £2/2/- in Victoria, and £2/1/- in New South Wales, South Australia, and Tasmania to £2/4/6 per week; preservation of existing margins above basic wage for higher grades of work; and an increase in the rates of juvenile employees in proportion to the increase in the basic wage. Claims in the log not dealt with will be considered at an adjourned conference to be held on May 1 next.

CANNED RASPBERRIES AND CURRANTS.

H. Jones & Co.'s New Industry.

"If the newly-erected plant at New Norfolk, Tasmania, for the canning of Raspberries and Currants is as successful as it promises to be, Australians will have to thank Sir Henry Jones for yet another table delicacy."

Thus the Sydney "Manufacturer," of March 8.

Quite recently Henry Jones & Co. Ltd., decided to build, at considerable expense, a plant for the canning of Raspberries and Currants. The plant at New Norfolk, with the exception of the syrup machine, was built at Messrs. Jones & Co.'s Hobart workshop, and is capable of turning out 60 cans of preserved fruit per minute.

The fruit used for canning is of the best quality, and as it is delivered in punnets—as specially arranged and paid for by Henry Jones & Co. Ltd.—the firm is able to preserve the berries whole.

Upon arrival at the factory the fruit is placed on benches, and a number of women are engaged in grading it, and placing it in 1 lb. preserving cans. The cans are then

passed on to a table, where each one is weighed and adjusted to contain the correct weight. Afterwards the cans are placed on a roller conveyor, and passed along to the syrup machine. After the cans are placed on the belt leading to this machine they are not touched by hand until they have passed through the various processes, and are ready for packing.

CONTRACT FOR FRUIT.

Interesting Legal Point.

A case was recently tried in the Tasmanian Supreme Court when the Port Huon Fruitgrowers' Co-operative Company issued a writ against Samuel Larkinson, of England, in respect to an alleged contract for the supply of Black Currants and Raspberries by the plaintiffs to the defendant, and for the rent of a factory at New Norfolk, the amount involved being £3,888/1/2.

Mr. Justice Crisp was called upon to decide whether the Court had jurisdiction over a case in which one of the parties resided in a "foreign" country, and after citing several instances under the Common Law procedure Act, he summed up his judgment as follows:—"To put the matter shortly, I think the Act, which was passed years ago, does not make provision for the suing of foreign companies. The writ must be set aside."

GAZETTE NOTICES.

The Cobram Fruit Packing Co. Pty. Ltd.

The above company was registered on February 26th, with an authorised capital of £1,500 in shares of £1 each: Subscribers: F. M. Quick, 25; P. R. Quick, 20; J. S. Cotton, 34. Registered office: Cobram, Vic. Officer Fruitgrowers Pty. Ltd.

Registration of the company was effected on March 8th with authorised capital of £2,000, in 2,000 shares of £1 each. Subscribers for one share each were—F. D. Love, G. E. Crook. Registered office at Officer, Vic. First Directors: F. D. Love, G. E. Crook, J. H. Rix, W. Godfrey, T. C. Whiteside. Principal objects: To acquire the business of Fruit Packer carried on at Officer (Vic.) by J. H. Rix. Bailey Baldwin Pty. Ltd.

First meeting of creditors was held at the office of the Liquidator, F. Oswald Barnett, 440 Little Collins-street, Melbourne, on March 12th.

CO-OPERATIVE CO. SUES ORCHARDIST.

Verdict for Defendant.

"An Unreasonable Agreement."

Considerable interest centred around a legal case which was heard during March in Victoria, relating to a co-operative company suing one of its shareholders for breach of contract, the verdict being given for the defendant with costs.

Judgment was delivered on March 14th by Mr. Justice Macfarlan in the First Civil Court, Melbourne, in an action brought by the Pakenham Upper Fruit Company Limited for an injunction to restrain George Fenwick Crosby, Pakenham, orchardist, and a shareholder in the company, from selling or delivering his Apple crop to any person or company other than the plaintiff.

Mr. Cohen, K.C., and Mr. Sanderson (instructed by Messrs. Wisewould, Duncan, and Wisewould), appeared for the company, and Mr. Walker (instructed by Mr. J. W. McComas) appeared for Crosby.

In support of the application it was stated that Crosby, who had been a shareholder since the inception of the company, became a director in February, 1923. In November he sent to the secretary a letter, tendering his resignation. The secretary replied, reminding Crosby that at a meeting of directors he (Crosby) had moved that the assessment of the coming crop should be prepared and presented to a formal meeting. Crosby, however, replied that he did not intend to send any more fruit to the company. He had 2,000 cases of Jonathan Apples ready for packing, and a further 2,000 cases would be ready in May or June.

Under the articles, shareholders were required to sell at least 95 per cent. of their fruit through the company, but in breach of that requirement Crosby had made sales to a Western market merchant, and had refused to deliver fruit to the company. Portion of the crop already had been sold by the company, and the balance was required for other customers. Failure to make delivery of the fruit to the company would involve it in loss and endanger its prospects.

As a result of decisions given by Mr. Justice Cussen in 1922, and subsequently by the High Court, in which life connection with co-operative companies was held to be invalid, and a restraint of trade, the plaintiff company had in February, 1923, altered its articles of association to enable shareholders to discontinue supplying fruit to the company by giving 18 months' notice.

The defence was a denial of contract, and that the agreement was an illegal restraint of trade. The amended articles of the company were

not admitted, and, in any case, did not constitute a contract.

Mr. Justice Macfarlan said that by virtue of a clause in the articles of the company giving it power to amend its articles at any time and to bind its members, the agreement was unreasonable. There was also a lack of mutuality. Judgment would be entered for Crosby with costs.

COLONIAL SUGAR REFINING CO. LTD.

Increase of Capital.

The Colonial Sugar Refining Co. Ltd. has increased its capital from £4,000,000 to £7,000,000 by the creation of 150,000 new shares of £20 each.

These shares will be divided pro rata amongst the persons who on March 31st, 1924, were registered holders of shares in the Company. On the announcement of the proposal to increase the capital being made public, the value of the Company's £20 shares rose from £50 to £55.

U.S.A. APPLE CROP.

The 1923 commercial Apple crop of U.S.A. was recently estimated by the Department of Agriculture. Indications pointed to about 2,300,000 barrels more than the previous year, and 12,000,000 more than in 1921. The forecast follows:—

	1923. Barrels.	1922. Barrels.
New York . . .	5,212,000	6,000,000
Pennsylvania . . .	1,227,000	1,216,000
Virginia . . .	1,750,000	1,100,000
West Virginia . . .	1,157,000	881,000
Ohio . . .	959,000	608,000
Illinois . . .	781,000	1,620,000
Michigan . . .	2,022,000	1,699,000
Missouri . . .	614,000	1,250,000
Arkansas . . .	745,000	520,000
Colorado . . .	867,000	1,034,000
Idaho . . .	1,349,000	975,000
Washington . . .	8,996,000	8,683,000
Oregon . . .	1,692,000	1,260,000
California . . .	1,531,000	1,200,000
Others . . .	4,488,000	3,044,000

Total U.S. . . 33,390,000 31,090,000
Allowing approximately three bushels to the barrel, the Apple crop would thus be 100,170,000 bushels.

TASMANIA.

Apple Export.

With 34,064 cases of Apples on board the steamer "Ulysses" left Hobart on March 18 for Liverpool, via Melbourne. This makes the tenth steamer to leave Hobart this season with fruit for the United Kingdom, and brings the total quantity shipped to the middle of March to 253,565 cases. In the corresponding period of last season a similar number of steamers had called and lifted 498,439 cases.

DRIED FRUITS.

A.D.F.A. Board Meeting.

Important Matters Decided.

New Season's Prices.

THE MARCH MEETING of the Board of Management of the Australian Dried Fruits Association was held in Mildura on 19th March, 1924, at the Mildura Council Chamber, kindly lent for the purpose.

The General Secretary, Mr. Sumner, reported that the "fall" clause adjustment in respect of Commonwealth fruit had been finalised, all agents having settled since last board meeting. A local difficulty re this matter in Western Australia necessitated a letter pointing out that no body of growers within the association could receive preferential treatment.

QUALITY DEHYDRATORS

J. H. MORTON, A.M.I.M.E.

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DESCRIPTION of DRYING APPLIANCE.

Write NOW!

Retailers' Rebate.—The Secretary obtained permission to pay the last amounts due on the old system of the retailers' rebate, and growers in the future will be free of what has long been deemed an incubus.

Authority was given for the securing of a quantity of Dried Fruits for propaganda purposes, at the metropolitan and other important shows.

Imperial Preference.—Careful consideration was given to a letter from Mr. F. L. McDougall, London, from which information was obtained re preference prospects and the Empire Exhibition scheme.

Raisin Bread.—With regard to the Raisin Bread campaign, the Secretary reported substantial progress in both Melbourne and Adelaide, and the extension of the propaganda work to Sydney was determined on.

The Board wish it to be known that solid spade work in regard to securing the co-operation of the bakers in the capital cities is their chief aim at this juncture, with a view to active propaganda on a stable foundation when funds and fruit stocks permit.

Numerous requests having been made by dried fruit district executives that the chairman should visit them, it was ruled that as the Chairman's time is fully occupied, wherever possible one of the Association organisers would attend.

Prices for New Season's Fruit were discussed with Mr. McKay, the merchants' representative. In announcing these prices the Association has in mind the fact that the bulk of the output this year will be of two crown grade for Currants and Sultanas. This will be the fruit most largely used by householders in Australia. Following are the prices:—

Currants— 1 Box.
4 Crown 78d.
3 Crown 71d.
2 Crown 7d.
M.F. (for manufacturers only) 63d.
Less 3 per cent. in 7 days, or 2½ per cent. in 30 days.

Sultanas—
4 Crown 91d.
3 Crown 9d.
2 Crown 83d.
1 Crown (for manufacturers only) 81d.

Lexias and Walthams—
5 Crown 63d.
4 Crown 61d.
3 & 2 Crown (for seeding only) 51d.
Muscats 63d.

Seeded Raisins—
Cartons (per doz.) 8/6
Loose (per lb.) 71d.

Presentation to Mr. Chaffey.—On Thursday evening, 20th inst., the Board visited Mr. W. B. Chaffey's residence and presented him on behalf of the growers throughout the A.D.F.A. districts, with a handsome solid silver salver, suitably engraved, with an accompanying cheque as some slight token of the goodwill and appreciation in which the former President is held by all growers in the industry now risen from small beginnings largely under his guidance to become the "third asset" in Australia.

Vacuum Fumigator.—A visit was paid to the Sarnia Packing Shed, to witness the trial run of the Vacuum Fumigator belonging to the Association and used by the Sarnia Co. for scientific experiments. The new engine power was quite equal to its task, and the result of the chemical tests will be awaited with interest.

Fruit for Empire Exhibition.—It was resolved that a shipment of fruit be specially packed in the old Publicity 10lb. tin containers to be shipped to London for sale at the Empire Exhibition.

The A.D.F.A. buildings in Mildura, one of the remaining assets of the Publicity Department, were inspected with a view to their early disposal. An offer is under consideration.

Sales Campaign.—The cartons for use in the proposed sales campaign were chosen, and matters of policy in respect to the scheme were discussed. Agents were circularised and asked to help the working of the scheme by

drawing any supplies needed from those sheds deputed to pack this special line.

An export proportion of 40 per cent. on Dried Pears was declared in view of the favourable London market.

Mr. H. R. Sloan was appointed an additional member of the Publicity Committee.

Fixation of Standards.—Members attended the fixation of standard samples at the offices of the Mildura Co-operative Packing Co., when the

Peace, one of the organisers of the Australia Dried Fruits Association, states that merchants have informed him of sales of seeded Lexias to the extent of 35 tons, in three months, whereas before the campaign the quantity sold would be only four or five tons annually.

MILDURA CO-OPERATIVE FRUIT COMPANY.

Successful Year's Operations.

At the 18th Annual General Meeting of the Mildura Co-operative Fruit Company, held at Mildura on February 2, Mr. A. L. Johnston presiding, the directors' report was unanimously adopted. It was stated that the volume of business and the net profit (£12,722) were the highest in the company's history. The capital had increased by £2,028, and now stood at £36,398. Nett profits since the Company's inception totalled £51,523; dividends paid, £13,623; bonuses, £37,372. It was proposed to distribute a bonus of 25/- per ton on the last pack, absorbing £10,200. Additions had been made to Birdwoodton and Merbein sheds, and financial assistance was still to be given to growers. Last year's pack totalled 8,474 tons, including 2,254 tons Currants, 4,574 tons Sultanas, 1,349 tons Lexias, of which 3,101 tons were sold in the Commonwealth, and 5,373 tons exported. Sweat-box values were expected to be for Currants about £40; Sultanas, £44; and Lexias £23.

OBITUARY.

We regret having to record the deaths of capable fruitgrowers, all of whom showed considerable energy in all matters affecting the welfare of the fruit industry.

We extend sympathy to the relatives.

Particulars are as follows:—

MURRAY.—On the 13th March, at Melbourne, Charles Murray, J.P., dearly beloved husband of Frances E. Murray, and loved father of Ted, Bert, Elsie (Mrs. G. Webb), Fred, Boodie (Mrs. S. Martin), Ruth (Mrs. W. Hutchinson), Reuben, Emily and Keith, of Somerville, aged 64 years.

BURGI.—On the 10th March, at the Lilydale private hospital, Edmund Burgi, beloved husband of Mary, and loving father of Bernard, Moira, Eddie, of Wandin North, in his 58th year.

ROSS.—The dried fruits industry has lost a trusty champion in the lamented death of Mr. A. E. Ross, Waikerie, S.A.

BIG TRACTOR DEMONSTRATION.

By the Gippsland and Northern Co-operative Co. Ltd.

Considerable interest was created at Diggers Rest, Victoria, on March 8th, in connection with the huge Tractor Demonstration held in Mr. James Wilkinson's paddock, near the Digger's Rest Station.

This represented the biggest demonstration ever held by a single company in Australia. Four different makes of tractors were seen in operation. There were approximately 200 people present.

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LONDON

Ridley, Houlding & CO.,

Large Receivers of Australian
Fruits.

Solicit Consignments of

Apples, Pears, &c.,

Best market prices and prompt
account sales returned.
Correspondence invited.
Representative in Victoria

THE

International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

merchants' representative and the Government Horticultural Inspectors for three States in consultation with an appointed Committee of 7, decided on the standards finally selected.

Next Meeting.—It was decided to hold the next board meeting in Melbourne on 29th April, 1924.

DRIED FRUIT PUBLICITY.

Reports to hand indicate that as a result of the campaign to increase the local consumption of dried fruit, there have been additional sales of over 400 tons.

As indicating the success of the Raisin Bread campaign, Mr. L. T.

Gerald Da Costa



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Market, London S.E.1. Tel. Hop
3373. Telegrams, "Borocost, London."
G.N.R. Potato Market,
King's Cross, N.1. Telegrams,
"Kincrococost, London."
3-5 Fudding Lane, Monument,
London, E.C.3. Tel. Avenue 7990.
Telegrams, "Fruits, London."
18 Stanley St., Liverpool. Tel.
Central 888. Telegrams, "Gera-
cost, Liverpool."
Southampton Docks (Facing
No. 45 shed), Tel. Southampton
2207. Telegrams, "Geracost,
Southampton." American
Branch, 202-4 Franklin St.,
New York. Cables, "Geracost,
New York."

The larger machines included the "Allis Chalmers," "Twin City," and "Wallis O.K."

The "Samson" is of a smaller type suitable for orchardists. This fine little tractor pulled a Harvey 3-furrow tractor lift plough. The outfit did good work, and created a favourable impression. The tractor handled the ploughing with great ease to a depth of 6 inches.

Those interested can obtain the various catalogues issued at the Gippsland and Northern Co-op. Co. Ltd., which are available on writing to the company's address—527a Collins-street, Melbourne.

New South Wales.

SYDNEY ROYAL SHOW.

Big Event at Easter.

Fruit Exhibits are Emphasised.

The Sydney Royal Agricultural Show will be held as usual at Easter. This is a big event, attracting entries and visitors from all parts of Australia and New Zealand.

A prominent feature is made of fruit exhibits, the large trophy designs being of especial interest.

H. M. WADE & CO.

Fruit Merchants

Prompt Advices of Sales
—CHEQUES WEEKLY—

471 FLINDERS LANE
MELBOURNE

Edward Jacobs & Sons

Covent Garden Market
LONDON, England

Solicits Consignments
of Australian Fruit.

Tasmanian Representative:

W. D. Peacock & Co. Ltd
PRINCES WHARF, HOBART

Shipping Number 418.

The Agricultural Society provides £20 for the exhibitors organising work in this section, and each exhibitor will share in the prize money in proportion to the points gained.

The Apple trophy designs are judged on their merits irrespective of the State from which the fruit comes: thus prizes in the past have gone to States other than New South Wales.

This season the Harcourt (Vic.) district is putting up an exhibit there for the first time. This is a progressive move, and the results will be followed with keen interest.

NEW SOUTH WALES FRUIT- GROWERS, ASSOCIATION.

At a recent meeting of the Central Executive of the Fruitgrowers' Association of New South Wales a sub-committee was appointed to draft a scheme of reorganisation, it being proposed that the executive be replaced by a fruitgrowers' federation, formed by the appointment of representatives of all sectional associations.

It was decided to ask the State Government to set aside an officer to deal with the question of brown spot in Passion-fruit and citrus, or to subsidise the Bureau of Science and Industry for the purpose of investigation.

Co-operative Packing and Cool Store at Batlow.

Batlow (12/3/24).

Fruitgrowers are enterprising and have organised a co-operative packing shed and cool store.

At a meeting of the shareholders of the Batlow Co-operative Fruit Packing Co., the directors reported that Mr. C. V. Henry, formerly of Tasmania, had been appointed manager. The packing shed was opened during March, and a distinctive brand is being arranged for Batlow fruit.

As the packing shed adjoins the cool store the fruit will be taken from the cool store to the shed on a gravity conveyor belt as required. Fruit not in the cool store will be delivered direct by the grower as the manager requires. An effort is being made to arrange for fruit trucks to be attached to the express or mail trains at Cootamundra, as is done with M.I.A. fruit, thus enabling it to be placed on the Sydney market the following morning.

The general handling of fruit through the shed, which is one of the most up-to-date in the State, follows the established American practice in the packing sheds of Oregon and Washington, the growers' fruit being pooled, and the pack standardised and marketed under the company's brand.

Cool Store.

The extension to the Batlow Cool Store is now completed, and Apples and Pears are being stored.

Somersby Packing Sheds.

One of the most successful packing houses now linked up with the New South Wales Central Citrus Association is said to be the Somersby Packing Shed, which has completed its first season's operations and made its final payments to the growers. The quality of the fruit, the high standard of grades, and the consistent uniformity of the pack has created a demand for Somersby fruit, which has realised highest market prices. Navel oranges commanded as high as 30/- a case, and whole consignments of extra choice Valencia have averaged as much as 25/-.

An experimental shipment to England of early varieties was highly successful, Mediterranean Sweet realising 36/- a case, and Parramattas 35/-. If these earlier varieties can be exported satisfactorily it will help to stabilise the local market.

Heavy Claims against Department.

Leeton (24/3/24).

Soldier settlers on the Murrumbidgee Irrigation Areas are filing claims against the Department of Agriculture to the extent of £13,000 owing to losses following on the planting of

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Clarence House

Arthur Street, London Bridge
LONDON E.C., 4, Eng.

We are the largest receivers of Green Fruit from Australia, our consignments having steadily increased annually since our business was established in London in 1902. Our Managing Director has had the handling of consignments to the markets of Great Britain and Europe since 1900, and personally supervises the sale of all fruit consigned to the Company. Fruit is placed for sale in whatever markets or way (auction or private) appear most suitable, thus getting it before all classes of buyers; our increasing consignments demonstrate the success of this practice.

F. W. J. MOORE,
Managing Director.

Telegrams: Tirralirra London

Bankers: Bank of New South
Wales.

unsuitable "1202" Sultana stocks, the settlers alleging that the stocks supplied by the Department are the cause of such losses. The basis of the claim is £90 per acre capital value, and £50 per acre for two years' loss of crop.

FRUIT TRAINS.

A Splendid Success.

Griffith (24/3/24).

The direct distribution of fruit from goods trains has taken a further step by the despatch of 40 tons of fruit from the Griffith Area, under the auspices of the Griffith Producers' Co-operative Co. Ltd., to the North

Coast. Sales were made from Dun-
gog to South Grafton. Unfortunately,
insufficient fruit was taken to supply
the demand, so that it will be neces-
sary to send a further supply the fol-
lowing week. Another 40 tons leaves
to-day for Grafton to Queensland
border.

T. STOTT & SONS

Fruit Merchants

Established 1882

A Trial Consignment soli-
cited from Growers in all
States.

Prompt Settlement.

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We are the Leading Australian
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FRESH FRUIT EXPORTERS,
JAM MANUFACTURERS (IXL
Brand), FRUIT CANNERS, HOP
FACTORS (owning the largest
cool stores for this purpose in the
Commonwealth).
Supplies of Corrugated Straw-
board, Genuine Sulphite Paper,
Nails and best Packing Materials
available at all times.
Sole Distributing Agents for the
Southern Tasmanian Associated
Manufacturers of Evaporated
(dried) Apples.

Agents for—
Federal Steam Navigation Co. Ltd.,
Scottish Shire Line of Steamers,
Osaka Shosen Kaisha, London
Assurance Corporation.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

Fruit Shipments

LONDON

Liverpool and the Continent

W. D. PEACOCK

& CO.

24 Martin Lane, Cannon St.
LONDON, E.C., 4
AND HOBART, TASMANIA

Solicit Consignments

The High Standing and Long Ex-
perience of this Firm is a Guar-
antee that the Best Interests of
Consignors will be conserved.

The fruit carried included Cling
Peaches, Purple Cornichon and Dora-
dillo Grapes, for which the demand
appeared to be about equal.

Prices were obtained far above
those ruling on the Sydney market at

the time. As a means of relieving
gluts such as are impending this sea-
son for late table Grapes (states Mr.
H. G. Such, General Manager of the
Griffith Producers' Co-op. Co. Ltd.),
this method of distribution warrants
the close attention of all organised
bodies of fruitgrowers.

Soldier Settler's Prune Crops.

A report from Young, New South
Wales, states that some of the trees
on the various soldier settlements
have produced fruit for the first time
this year. The Prunes and Apples
are excellent in quality, and most of
the orchards are in first-class condi-
tion. The growers, however, are get-
ting uneasy in regard to the delay
over the Government scheme of mar-
keting, and they fear there will be no
plant to deal with the 40 or 50 tons
of Prunes which they are expecting
near year.

A Heavy Peach Crop.

Mr. J. P. O'Callaghan, Leeton,
N. S. W., writing on Feb. 18, said.—
"I notice in your 'News in Brief' in the
'Fruit World' of Feb. 1st., that a
grower at Leeton pulled 38 tons of
Pullars Cling Peaches off 2½ acres.

"I can go one better than that. I
pulled over 60 tons of Pullars Cling
Peaches from 2½ acres at 90 trees to
the acre. I delivered 56 tons 12 cwt.
to the local Cannery fit for canning.
The balance I sold outside. Don't you
think it looks like a record?"

SPEED WAGGON FOR ORCHARDISTS.

The motor waggon is becoming in-
creasingly popular amongst orchard-
ists as a means of transporting their
fruit to market, also from orchard to
railway station. Motor waggons are
rapidly replacing horsedrawn vehicles.
Before purchasing orchardists should
investigate fully the advantages of-
fered by the Reo Speed Waggon, and
which is manufactured throughout in
the Reo works—not assembled. It is
suitable for all classes of work, where
rapid transport is required, at a mini-
mum cost. Loads of 2,500 lb. can be
moved at 30 miles per hour, with a
petrol consumption of 15 miles per
gallon. The Reo is built in three
sizes—128 inch, 150 inch, and 166
inch wheelbase.

There are 100,000 of these speed
waggons in use at the present time,
and it is claimed by the manufac-
turers that the Reo Speed Waggon
will deliver goods quicker and
cheaper than any other commercial
motor vehicle in the world, regardless
of weight, size, capacity or price. It
is suitable for all classes of transport,
including goods and passengers.

STANDARDISED ORANGE PACKS.

A Correction.

We are desirous of making a cor-
rection regarding the Orange Packs,

as mentioned on page 132 of our
March issue. The asterisks which
were placed against the following
counts, viz., 158, 140, 126, 112, 96, 75,
60, 53, and 45, were intended by our
correspondent to indicate the packs
that would be most commonly used in
the packing shed, instead of the sizes
"most profitable on the market," as
stated in the explanatory note in our
last issue. Mr. Krone draws attention
to this matter because the very large
sized Oranges have not the same com-
mercial value as the medium-sized
and smaller fruits.

With regard to packing Oranges
for export, as per table published on
page 133 of our March issue, the as-
terisks denoting the best selling sizes
to pack for export are quite correct.

Classified Advertisements.

Wanted and For Sale.

Advertisements under this head-
ing, which cannot exceed one inch,
will be classified as far as possible.

Prices are as follows:—

Casual Advertisements, one or
three months—9d. per line of six
words. Nine lines to the inch.

Contract Advertisements, six or
twelve month, 6d. per line of six words,
9 lines to the inch.

Send cash with order.

WANTED.

EXPERIENCED HORTICULTUR-
IST seeks position of respon-
sibility, 20 years practical
knowledge, fruits, roses and ornamen-
tals. Highest references. Apply
"Citrus," Pyap, River Murray, South
Australia.

FOR SALE.

A LIMITED quantity of our new
late Raspberry (Exton's Late
Prolific.) Fruit commence to
ripen as other varieties are going out,
thus extending the season.

For further particulars apply,

C. Exton and Son,
Kinglake, (Vic.)

SUNDRY.

OLD ESTABLISHED ENGLISH
PROVISION HOUSE, with
"live" selling organisation and
powerful connections, open to nego-
tiate large business in British Isles
for Canned Goods, Dairy Produce
Factories, Fruitgrowers and Packers.
To act either as Buying or Selling
Agents. Confidential. Write "F.W.,"
c/o Street's, 6, Gracechurch-street,
London, E.C.3.

WE BUY LEMONS

Green Citrons and Shaddocks. Seed-
ling Oranges, Tomatoes, Cherries for
crystallising. Loganberries, Raspber-
ries and Strawberries, Passion Fruit.

C. M. BROOKE & SON,
Whiteman St., South Melbourne, V. & C.

REDUCED WAGES

LISTEN !

TWO MEN'S WAGES AT £3/15/- PER WEEK EACH FOR 2½ WEEKS WILL PAY FOR A "LIGHTNING" FRUIT GRADER.

When the "Lightning" was installed in a packing shed, it released **THREE MEN** from the shed. Wages of three men at £4 per week each, = **£12 SAVED IN ONE WEEK.** **THIS** is how we reduce your **WAGES BILL.**

Why not give us the opportunity of proving what we say?

The "Lightning" Fruit Grader

Is the **SIMPLEST, STRONGEST, MOST EFFICIENT** Machine on the Market.

The Machine with an **ESTABLISHED REPUTATION** and an **EVER-INCREASING POPULARITY**

CANNOT BRUISE THE FRUIT



We will be pleased to post you Catalog containing full particulars. Made in Nine Models up to 10 Grades. Grades all Fruits—Apples, Pears, Oranges, Peaches, etc.

Capacity: From 500 to 1,000 cases per day.

Prices from £18/15/-

We have bought the patent rights of the **"PENANG" FRUIT GRADER**, and have added improvements and are now manufacturing them.

LIGHTNING FRUIT GRADER Co.

109 Cromwell Street, Collingwood, Melb., Vict.

Telephone J 1084.

Queensland.

Activities of the Committee of Direction of Fruit Marketing.

Advices to hand from the Committee of Direction of Fruit Marketing notify that action is being taken in every way possible to benefit the growers and the industry generally.

Prior to the inauguration of the Committee of Direction, a "train fee" was charged to maintain the organisation of fruitgrowers in connection with the transportation and marketing of fruit to the Southern States; but owing to certain economies and additional sources of income now available in the operation of the Committee of Direction, the charge is no longer necessary, hence it has been abolished.

The Fruit Standing Committee of the Council of Agriculture is alive to the danger of the bunchy top disease in Bananas, and is co-operating with the Department of Agriculture to prevent its spread in Queensland.

The Committee has given serious consideration to the export of immature fruit to the southern States, the object being to prevent any fruit going forward that might reflect on the good name of Queensland. It is understood that legislation dealing with this matter is likely to be brought in shortly.

The Fruit Fly research work, which is being extensively carried out both by the Department of Agriculture and the University, is receiving the whole-hearted support of the Fruit Standing Committee of the Council of Agriculture.

KILL THE CODLIN MOTH

and other insect pests with

HEMINGWAYS (English)

ARSENATE OF LEAD

(Paste)

The Best and Most Successful on the market

Effective, Economical and Easy to Use

Prices

1/3d per lb. for 100lb. kegs

1/3½ per lb. for 50lb. kegs

Wholesale distributing agent for Victoria,

Esmond Russell

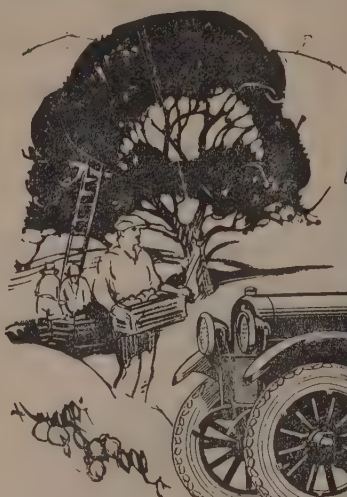
60 Queen Street, Melbourne

LAWREY'S KINGLAKE NURSERY.

Wide Range of Fruit Trees Offered.

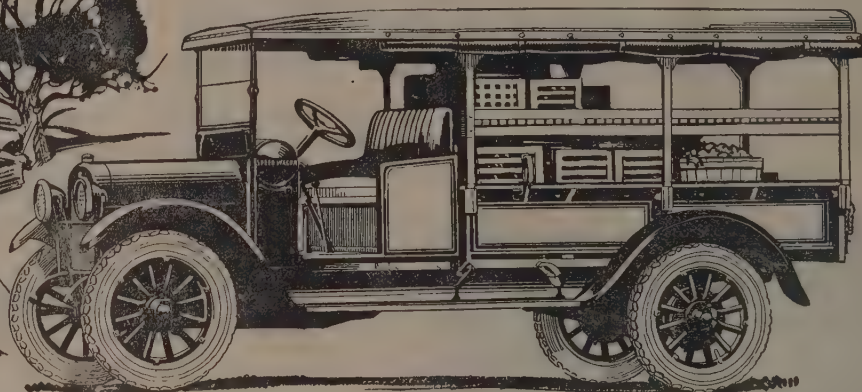
Mr. Jas. W. Lawrey, nurseryman, of the Kinglake Nurseries, Yarra Glen, Victoria, has issued a catalogue setting forth the various trees and plants he has for sale, together with the prices of the same. Mr. Lawrey offers a full range of commercial fruits and their varieties, and draws attention to the fact that the soil and climate at the Kinglake Nurseries on the top of the Great Dividing Range are ideal for the production of strong, sturdy trees which, when planted out in orchards, will, under ordinary care, thrive vigorously. Mr. Lawrey's experience as a practical fruitgrower and judge at fruit shows, as well as a lifelong experience of the nursery trade, are freely at the disposal of his clients in regard to supplying information as regards the best trees to plant in specified localities. Correspondence is invited on the subject, and the same will receive prompt attention.

Apples worked on blight-proof roots and stocks are quoted at 15/- per doz., or £5 per 100, the same prices being charged for Almonds, Apricots, Cherries, Peaches, Pears, and Plums. In addition, Currants, Gooseberries, Raspberries, Mulberries, Filberts, Chestnuts, Walnuts, Figs, and citrus fruits are offered from the Kinglake Nurseries, Yarra Glen, Victoria.



Chassis complete with electric light, self-starter, mudguards, valances, running board, windscreen and five 33 x 5 special cord truck tyres.....

£475



SPEED **REO** WAGON

The Fruitgrower's Rapid Transit System

FRUIT may spoil when transportation hesitates. Fleetness and get-there sureness are vitally necessary factors in the vehicle when any kind of perishable produce is the load.

Pneumatic tyres and proper balance give the Speed Wagon traction for the ploughed fields.

The famous Speed Wagon engine and spiral bevel gear axle give it fleetness which brings the market or cannery closer to home. Long springs and cord tyres keep road shocks from the easily spoiled load.

Certainty of performance, and endurance qualities for a quarter-million (or more) miles of service, are built in, because of:

- Inner frame anchoring of power unit s.
- Thirteen-plate clutch.
- Amidship mounted transmission.
- Super-powerful brakes.
- Vital parts 50% oversize.

The sum total is **ECONOMY**. On the basis of lasting economy the Speed Wagon is the lowest priced commercial car in the world.

Sole Victorian Distributors:

Queen's Bridge Motors Pty. Ltd.

Right at

QUEEN'S BRIDGE, SOUTH MELBOURNE

Telephone Central 4141

Victoria.

AUTUMN FRUIT SHOWS.

Interesting and Successful Displays.

The Autumn Fruit Shows this season have proved to be extremely interesting, maintaining that desirable spirit of pride in the local districts and winning appreciation from the visiting public.

The Show Committees and their hard working executive officers are deserving of hearty congratulation.

In Victoria, Shows were held as follows:—

DIAMOND CREEK.

The fortieth Annual Show was opened by Mr. W. Angliss, M.L.C., on March 8th, and was an interesting display, though not quite up to the standard of previous years. The quality of the fruit was excellent, and the vegetables were particularly good. A special champion prize for nine varieties of Apples and six of Pears was won by Mr. J. Cowin, with the following varieties:—(Apples) Jonathan, Gravenstein, Granny Smith, Stone Pippin, London Pippin, Rome Beauty, Rymer, Reinnette and Stewart's; (Pears) Williams', Packham's, Howell, B. Bosc, Winter Cole and Kieffer. The second prize went to Mr. G. J. Middleton.

The champion prize for nine varieties of Pears was won by Mr. E. D. Wadson, a well-known and successful grower, who staged excellent specimens of B. Bosc, Packham's, Williams', Josephine, Winter Nelis, Winter Cole, Madam Cole, Black Achan, and Kieffer; the second prize being won by Mr. P. Lawrey, the last-named grower being also successful in winning the prize for the collection of three varieties of Peaches, the varieties being Catherine Anne, Smith's Seedling, and Belot's Late.

Mr. J. M. Ward, Superintendent of Horticulture, said the greatest problem facing the fruit industry was that of finding markets. At the same time it was necessary to conduct a vigorous campaign to combat insect and fungoid diseases. In dealing with these matters he was being ably assisted by the Director of Agriculture, Dr. Cameron. With regard to the fruit at the Show Mr. Ward trusted that in the future a greater feature might be made of entries in the packed case section.

SOMERVILLE.

The Somerville Show was opened by Senator Pearce on March 12th in delightful weather. The speaker apologised for the unavoidable absence of the member for the district, Mr. S. M. Bruce, the Prime Minister. Senator Pearce said he trusted Australia would soon enjoy a measure of

Imperial trade preference, not only in England but in Canada.

The quality of the fruit at this, the twenty-eighth Annual Show, was all that could be desired, reflecting great credit on the exhibitors, whether prizewinners or not. The champion prize for twelve varieties of fruit for export was won by the Two Bays Nurseries Co., who staged Jonathan, Tasma, Statesman, Sturmer, Cleopatra, Rome Beauty, Delicious, London Pippin, Granny Smith, Dunn's, Spitzenberg, Stayman, and Winesap. Mr. G. A. Grant came second.

The North and Midland Counties of England

Are directly served by

THE PORT OF HULL

Every modern facility for prompt handling of fruit.

Docks and quays provide for quick discharge of cargoes.

Sales held daily during the season.

Express train service to all parts of England.

Australian Oranges Sold at Hull in previous seasons brought record prices.

For further particulars apply to

E. BECHERVAISE

Representative in Australia

51 Moorabool St., Geelong
Victoria

In the section, "twelve varieties of Pears," Mr. W. F. Boe came first with the varieties—Williams', Beurre de Cap., Black Achan, Winter Nelis, Conference, Josephine, Packham's, Kieffer, Twyford Monarch, Vicar, Beurre Bosc and Beurre Clairgeau.

The Peninsula Packing Co. put up a bold comprehensive exhibit, showing Apples in massed display, also packed cases.

Various other fruits were shown, also flowers. The vegetables showed surprising growth.

The Show was of the usual comprehensive nature, including exhibits of domestic crafts and school work. Outside ring events were keenly contested, and provided items of interest to the large attendance. This Show

of the Somerville Horticultural Society was of a high standard, reflecting as it did the fertility and prosperity of the Mornington Peninsula.

RINGWOOD.

The Ringwood Horticultural Society held its 32nd Annual 2-Days' Show on March 14th and 15th, the Show being opened by Mr. Robert Cook, M.H.R. Mr. W. H. Everard, M.L.A., spoke of the activity of the Ringwood Society in advocating the necessity for open markets and the appointment of a Director of Horticulture. Mr. A. E. Chandler, M.L.C., speaking at the Show luncheon, stated that there was urgent necessity for growers to improve their packs for the export trade.

The fruit at the Ringwood Show was in every way excellent, being an improvement on last season's effort. There were keen contests in the dish classes, but it was felt there was room for additional exhibits in tray and case fruits.

In the champion exhibit for four varieties of Apples and four varieties of Pears suitable for export, the Challenge Cup was won by Mr. J. Tainton, Senr., who showed in the Apple section beautiful specimens of Jonathan, Delicious, Dunn's, and London Pippin; and in Pears—Packham's, Beurre Bosc, Winter Nelis, and Winter Cole. Mr. H. L. Tompkins, of Kilsyth, was second, with Rome Beauty, Granny Smith, Jonathan, and London Pippin Apples, and Packham's, Beurre Bosc, Williams', and Josephine Pears. The last-named exhibitor also won the Victorian Agricultural Department's gold medal for the best four export varieties.

At the Ringwood Show there were in all over 2,000 entries, including fruit, preserves, flowers, vegetables, poultry, fancy work, etc. In the flower section the exhibits were particularly fine, there being glorious displays of Gladioli, Asters and Dahlias. In Gladioli the exhibits of Mr. Scott Morrison and Mr. W. Murfett were first rate. The Executive Committee which had charge of the arrangements for the Show, is to be congratulated on the success attained.

CROYDON.

The 3rd Annual Show of the Croydon and Districts Horticultural Society, which embraces Croydon, Kilsyth, Wonga Park and Montrose districts, was held at Croydon on March 21st and 22nd. The official opening was performed by Mr. W. H. Everard, M.L.A.; Mr. A. E. Chandler, M.L.C., was also present. Owing to the unfavourable season the entries in the fruit section were not as numerous as in previous years; the total entries, however, taking in other sections, were larger than last year. Some excellent fruit was exhibited, and favourably commented upon by the Judges.

Prizes for the first four sections, which covered the Government certificate for the best four dishes of Apples, export varieties, champion six varieties of Apples and three Pears; champion six varieties of Apples; and best three varieties of dessert Apples, were all secured by Messrs. H. L. Tompkins & Sons. In addition they secured a number of awards in other sections. The export varieties which secured first place were London Pippin, Granny Smith, Rome Beauty, and Jonathan. A feature of the bulk of the Apples shown in all sections was the excellent colouring.

Other prize winners included Messrs. E. R. Burch & Sons, N. D. Hughes, E. Symonds, E. J. Knee, R. Langley, J. Maguire, R. Kirkwood, J. Crossman, J. L. Small, F. Topping, S. Mountor, Stowell & Brighton, Mrs. N. White, D. B. Duncan, A. C. Chandler, W. S. Elder, L. R. Francis, and E. Gaudion.

An excellent programme of arena events was carried through on the second day. The attendance throughout was satisfactory. The President of the Society (Mr. H. L. Tompkins), the Secretary (Mr. R. Langley), and Committee, are to be congratulated on the success of their efforts.

Wandin.

The Annual Show was held at Wandin on March 8th. The exhibits were numerous and of excellent quality. Mr W. H. Everard, M.L.A., the member for the district, stated that the Society was deserving of great credit for the manner in which the Show was organised, and all the exhibitors for the good quality of the produce shown. Mr. Everard referred in particular to the vegetables, which he stated were the best he had ever seen.

Wandin is the centre of a progressive fruitgrowing district. In addition to the fertility of the soil, the district is noted for its charming scenery. The recent Show demonstrated the wide diversity of fruits which could be commercially grown.

Red Hill.

The third Annual Show of the Red Hill and District Agricultural and Horticultural Society was held on the 26th March. There was a large attendance, among whom were Mr. Gordon, the new Minister of Agriculture and Water Supply; Dr. Cameron, Director of Agriculture; Hon. A. E. Chandler, M.L.C., and Mr. A. Downward, M.L.A., and Hon. Tyner, M.L.C. The Show was the most successful yet held, there being over 75 per cent. more entries than last year. The fruit was of exceptionally high quality.

The official opening was performed by the Minister of Agriculture, Mr. Gordon, who spoke in terms of appreciation of all produce displayed, more particularly the fruit, which would compare with that produced in any district in Victoria.

To show the enormous extent the fruit industry is growing will be seen from the fact that in Victoria alone there are 7½ million trees planted, of these 5½ million are bearing, and 2½ million non-bearing, in addition, there are 3½ million of berry fruit plants and nuts. We must find new markets for the fruitgrower and offer better facilities for transport. One of the most important things at the present time was packing, to pack on a standardised scale, and to make it uniform throughout the State. A Director was about to be appointed to take charge of the packing and grading of fruit in the State.

Hon. A. E. Chandler, M.L.C., stated that fruit from West Australia and

the Show to-day. A very fine pyramid of various fruits was staged by the growers, and showed clearly the excellent class of fruit that can be produced in the district. Messrs. W. E. Barker and Son were the most successful exhibitors, with a total of eight first prizes and two seconds; Mr. T. Chapman four firsts and one second; and R. Holmes, four firsts and one second. The Challenge Trophy, gift of Hon. A. E. Chandler, for the Champion section of three cases of distinct varieties of Apples, wrapped, packed and nailed down for export, was won by R. Holmes, with K. Cleine second, the varieties being Jonathan, London Pippin and Rome Beauty. Mr. K. Cleine secured the



33 year old Apricot tree at Riverside, near Horsham, (Vic.) (Particulars on opposite page.)

South Australia was preferred in London to Victorian fruit. There were many good packers here, but it was the badly graded and loosely packed fruit, which depreciated the good name of the State. To send fruit from London to Manchester cost about 2/6 a case: fruit should be sent direct to Manchester, as that port had every facility for handling fruit. The fruit industry was now so great that the Government should appoint a Minister for that particular portfolio.

Mr. F. W. Vear, responding on behalf of the judges, said there was one thing he would like to see cut out, and that was "the tray of largest Jonathans." Growers should show the "Jon." as they should be grown, and not nearly 4in. in diameter as in

gold medal given by Messrs. Jaques Pty. Ltd. for the Champion Tray of Dessert Apples. T. Chapman was second. The case of Apples, fit and packed for export, was won by Mr. R. Holmes, with Sheehan Bros. second. The case of Jonathan Apples packed for export was won by Mr. F. J. Simpson. N. Prosser second. Other prize-winners were:—Messrs. G. Laurrissen, Haig Bros., D. V. Barker, N. Prosser, K. Cleine, Holmes Bros., F. Butler, S. M. Holland, F. Nash, J. Roberts, H. Browning, F. J. Simpson, J. E. Holland, W. Roberts, W. Ward, Sheehan Bros., R. Edwards, Mrs. C. A. Trewin, Mrs. H. T. Cubitt. The vegetables were of enormous size and of fine quality. Among the other exhibits were poultry, horses,

cattle, flowers, dairy produce, etc., and the arena events were enjoyed by all present. The Committee and Secretary (Mr. H. W. Amos) are to be congratulated on the work they performed in making the Show such a success.

VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

The monthly meeting of the Executive of the above Association was held on March 25th. Present:—Messrs. V. R. McNab (Chairman), W. J. Foster, J. H. Lang, F. W. Vear, A. F. Thiele, H. H. Hatfield, C. W. Grant, J. Tully, J. W. Aspinall, and

Delegates to Interstate Conference.—Messrs. J. H. Lang, V. R. McNab, and A. F. Thiele were appointed. Messrs. Foster and Bailey and others are also going as visitors.

Victorian Fruitgrowers' Convention.—The date of the Annual Convention, which is to be held at Shepparton was altered to May 20-22. The following inter alia are the subjects listed for discussion:—Retention of 10-ton railway trucks, reduction of railway freights by 25 per cent., sale of fruit in open cases, registration of orchards, establishment of a research station, new disease affecting Pear trees, prepaid freight on case and half-case lots, direct distributing, compensation for growers prevented from marketing their fruit by Government restrictions, constitution of Association.

It was also decided to arrange for a discussion on "How to Run a Fruit-growers' Association," introduced by Burwood East, and an address by Mr. J. M. Ward on "Fruit Packing Classes."

Packing Education.—It was decided to approach the Government with a view to obtaining a grant of £50 to provide prizes for competitions in packing fruit amongst school children.

Bounty on Canning Pears.—Mr. Foster referred to the serious position in which Pear growers would be placed next season if the Federal Government do not grant a bounty on canning Pears. The whole of the crop would be thrown on to the fresh fruit market. A sub-committee, consisting of Messrs. Foster, Tully and Vear was appointed to bring the matter before the National Council.

A Giant Apricot Tree.

The photograph on this page, taken by Mr. Cahill at Riverside, near Horsham, Victoria, is a picture of an apricot tree, planted nearly 33 years. It has a trunk five feet in circumference, and the spread of the tree is fully 40 feet. In one year recently over 24 cases of apricots were gathered at one picking. The tree is growing in Mrs. Jardine's orchard. It is only one of many.

GRAPES FOR NEW ZEALAND.

Are Our Barrels Too Expensive?

We received our first consignment of Grapes per the "Moeraki" (writes Messrs. Reilly's Central Produce Mart Ltd. on March 20th). These were packed in barrels, but in our opinion the barrels were unnecessarily strong and expensive. A much cheaper barrel could have been used quite as advantageously.

We are particularly anxious to see this trade develop, as there is a good market in N.Z.

The Grapes that came forward were Muscats, very nice quality, and averaged about 10d. per lb. The cost of the barrel was 6/- or 7/-; the saw-dust weighed 8 lbs., the barrel

14 lbs., a total of 22 lbs. of gross freight, and the Grapes only averaged about 22 lbs. per barrel, with the result that the weight in the way of package is as much as the nett contents.

Whereas with Grapes from America, the barrels used are very much lighter, and the tare of the barrel only runs out about 7 lbs., and the dust used about 4 lbs., the contents of the barrel averaging about 36 lbs. to 40 lbs. of Grapes.

It seems to us that with the Australian barrel, cork dust would have been preferable to the saw-dust used

MARGETSON & CO. LTD.

Fruit Importers & Salesmen

30 James St. and James St. Warehouses,
11 Neil St.,
COVENT GARDEN
LONDON, W.C.

and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL.
Head Office—Covent Garden
Market, London, W.C.

Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand,
London, W.C.

TASMANIAN AGENT
A. J. WALSHE,
41 Collins Street,
HOBART.

the Secretary and Treasurer. An apology was received from Mr. J. W. Bailey.

Cronin Memorial.—The following donations were reported:—East Burwood, £10/10/-; Ardmona, £2/2/-.

Defence Fund.—A letter was received from the Secretary of the Producers' Defence Fund, forwarding cheque for £70 towards the expenses of orchardists in connection with the recent arbitration case. Mr. J. H. Lang reported that the total expenses for the case were £181/11/- It was decided to allocate the balance of the expenses amongst the affiliated Associations. The report was received, and a motion carried thanking Mr. Lang and Mr. J. D. Fraser (Secretary) for their services.

SWANN & Co.

Established 1822.

A century's experience in handling

FRUIT OF ALL DESCRIPTIONS

All Consignments for U.K. will have Personal Supervision and Attention

Account Sales and Cheques despatched immediately after sale.

3 SALTER'S HALL COURT,
London, E.C., England

Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.

Australian Representative
Chas. E. Howship, 129 Queen-st.,
Melbourne, and Surrey Chambers,
Perth, W.A.

Victorian Agent: H. M. Wade &
Co., 471 Flinders Lane, Melb.

J. G. MUMFORD

Est. 1906.

Fruit Merchant

Fruit and Vegetables sold
for growers from all States.

Account Sales posted daily.

— Exporter —

Exporter of fruit to English
and Continental markets.

449-451 Flinders Lane,
Fruit Exchange, Melb.

Reference—Satisfied Growers
in all States.

by Australian packers, and possibly a large, lighter and cheaper barrel.

If this is done we think there would be a prospect of securing payable prices. The fact that the Grapes realised 10d. per lb., and at this money there was a keen demand, proves conclusively that if we cheapen the cost of production we are going to have the demand.

We are enclosing herewith a cutting taken from our local paper, where you will notice we are particularly advertising these Grapes so as to give our consignors the best service possible.

Cool Storage Congress.

The Quarterly Meeting of the Fruitgrowers' Cool Stores Association of Victoria was held on February 19th, 1924, when the President, Mr. R. Mair, presided.

The Chairman reported that the Peninsula Stores had held a conference and arranged a programme for the 1924 Conference, viz., that the Conference be held at Frankston during August with an inspection of District Stores and points of interest on the following day.

Political Changes.

Owing to the Convention of the Farmers' Union during March passing a resolution limiting the support of the Farmers' Union to the life of the present Parliament, the Nationalist Government tendered its resignation, and the Premier (Mr. Lawson) was commissioned to form a new Cabinet, which he did, eliminating the members of the Country Party. Mr. Old, Minister for Agriculture, and Mr. Wettenhall, Honorary Minister in charge of the Fruit Industry, were amongst those displaced from office, the new Minister for Agriculture being Mr. J. Gordon.

It is understood that the Department of Agriculture, being in favour of reforms, published in our last issue, will endeavour to have the necessary legislation enacted.

These include the Orchard Registration fee, adoption of the Federal Grading Regulations by the State for local marketing, and selling specified fruits by number instead of by weight.

ORCHARD REGISTRATION CONFERENCE.

A conference took place during March at the Agricultural Department between the Assistant Minister of Agriculture (Mr. Wettenhall), the Director of Agriculture (Dr. Cameron) and the Superintendent of Horticulture (Mr. J. M. Ward) to draw up a scheme for orchard registration.

For some time the necessity of registration has been emphasised by various sections of the fruit industry. The need for registration has become more pronounced.

At the conference it was admitted that had there been registration of orchards and detailed information relating to the fruitgrowing areas throughout the State, same would have been of untold value to officers of the department.

It was finally decided that the scheme drawn up, providing for the registration of orchards and the establishment of a fund to meet emergencies such as the Fruit Fly outbreak, should be placed before Cabinet.

DORADILLO GRAPE GROWERS.

A Serious Position.

An urgent appeal has been made to the Federal Government on behalf of those settlers who have devoted themselves to the cultivation of the Doradillo Grape, which is used mainly for the distillation of brandy, and Mr. G. Grant, manager of the Tresco Fruitgrowers' Association (Vic.) declares that any help given, to be of value, must be given promptly, else many disheartened settlers, unable to carry on, will be forced to abandon their blocks.

The Doradillo Grape is suitable only for distilling, and on the present basis of excise duties, the distillers declare they cannot pay the minimum price which would afford the growers a profit, namely, \$6 per ton. It is urged that the Government should reduce the excise (now 26/- per gallon) by 5/-, in which case the distillers would be able to take the whole crop, from 7,000 to 8,000 tons, at the required price. The matter has been placed before the Tariff Board, and export bounties have been suggested.

FRUIT FLY IN VICTORIA.

Not Eliminated Yet.

It was hoped that the report could have been published in this issue stating that Victoria was free of the Fruit Fly, but unfortunately it has to be recognised that not only is the Fruit Fly still present in Mildura, but that this pest has been found in other centres. Around Cobram and Yarra-wonga, on the River Murray, the infestation is fairly serious. At Shepparton, too, an outbreak has occurred.

The Department of Agriculture is pursuing vigorous methods to eradicate the Fly. In the last-named centre all fruit must be removed from the trees by April 8th; the Shepparton Cannery has been working at double pressure in order to handle the crops of ripe fruit, thus to minimise the chances of infection.

Growers in the Mildura area have filed claims for compensation amounting to £12,000.

In South Australia regulations have been enforced against the importation of fruit from any State or territory in the Commonwealth in which the Mediterranean Fruit Fly is known to exist, unless accompanied by an inspector's certificate stating that the orchard where such fruit was grown

and all land within five miles of it, has been free of the pest for at least two years. These provisions will be insisted upon until Victoria has been declared free of Fruit Fly.

The earnest efforts of the growers, supported by the Department of Agriculture, will doubtless go a long way towards ridding Victoria of the Fruit Fly pest. There is also the fact to be recognised that winter is approaching, and it is believed that the sharp frosts which occur in the areas now troubled with the Fruit Fly will prevent a recurrence of the pest.

The past season has been particularly suitable for the development of fruit and vegetation pests of all kinds.

It is believed that the outbreak of Fruit Fly 18 years ago was equally as severe and widespread as the present infestation, but during the succeeding winter the pest entirely disappeared.

The Mildura Shire Council has resolved to assist the growers' committee to obtain compensation.

Red Cliffs (24/3/24).

About 600 tons of dried fruit will be packed this season. The quality of the fruit on this soldier settlement is excellent.

Healesville Orchard Sold.—Messrs. F. W. Vear and W. Muir, Burwood, and one other, have purchased the large orchard and cool store previously owned by the late Mr. Westmore Stephens, at Badger Creek, Healesville (Vic.).

RESOURCES DEVELOPMENT TRAIN.

Attention is drawn to the No. 6 Tour of the Victorian National Resources Development Train, which is to commence on the 7th April, 1924, returning to Melbourne on the afternoon of the 12th. The "Reso" train will leave Spencer-street on the Sunday evening, April 6th, for a tour of Gippsland, some of the districts passed through being Korumburra, War-ragul, Sale, Orbost, Bairnsdale, Maffra, and Yallourn.

These "Reso" trains are doing much good in enabling city residents to grasp the importance of country development.

CASE TRACTOR.

The Case Tractor is appreciated by users. Some of the points in its favor are stated by the makers to be (1) dependable power at low cost, (2) economy, because of its great capacity and durability, (3) short turning and flexible steering, giving complete control of the tractor and implement by one operator. The Case Tractor is supplied in four sizes, details of which are obtainable from the Commonwealth Agricultural Service Engineers Ltd., 53 Morphett-street, Adelaide, and corner King and Flinders-streets, Melbourne.

Cooksley & Co.

(W. P. COOKSLEY)

Reliable Fruit Agents

22 Years' Experience

TRY THEM!

Fruit Exchange, Brisbane

QUEENSLAND.

Shipping No. 29

Reference: Commercial Banking Co. of Sydney Ltd.

New Zealand.

Fruit Statistics.

The Minister of Agriculture for New Zealand (Hon. W. Nosworthy) addressing the recent annual Conference of N.Z. Nurserymen, stated that during 1923 there had been planted in the Dominion 178 acres of new orchards. Large numbers of orchards, however, had been cut out in the Nelson and Auckland districts, mainly through lack of sufficient funds to carry on.

The orchards registered totalled 7,044, representing a total of 30,000 acres. Nearly 150,000 cases of fruit were exported during the 1923 export season, and of these 102,184 cases of Apples were shipped to Great Britain, 40,963 to South America, and 4,512 to Honolulu, these figures constituting a record quantity of fruit exported from the Dominion in any one year.

Although a percentage of the fruit shipped to South America realised good prices, the majority was sold at a loss. With a view to preventing a recurrence of this, the growers had been instrumental in setting up an advisory committee, which was to co-ordinate, as far as possible, the Dominion's export fruit trade with South America, to extend all channels of trade.

The Government had decided to extend the guarantee of 1d. per lb. net return on shipments of Apples made from New Zealand during the 1924 and 1925 seasons, the guarantee being restricted to a maximum of 250,000 cases.

During the year ended March 31 last, 66,000 plants had been imported to the Dominion, and in addition, 7,700 fruit trees were imported, mainly citrus trees and Cherry and Pear stocks. Good work had been done by the Department officers in the control of fire blight, the disease having spread to a very slight extent in the Auckland district.

"The position at the present time is satisfactory," concluded the Minister, "the majority of the owners of Hawthorn hedges having taken the required action under the regulations. The Institute of Horticulture has been registered, and it is to be hoped that it will be successful."

New Zealand Fruit Marketing.

The New Zealand Fruitgrowers Federation Ltd. through the Manager, Mr. H. E. Napier, reported on Feb. 21st as follows with regard to the marketing of fruit.—

Export.

We anticipate that the total export from New Zealand to the United Kingdom during the coming season will be 200,000 cases, which is practically double that of previous years.

Pears.

Small shipments of pears will go forward this year more for experimental purposes. These will be packed in trays, three of which will be cleated together to make one package, each tray will be lidded in order that it may be sold as a complete package if necessary.

Control Board.

A Bill was drafted to be brought before the last Parliament, dealing with the control of export and local marketing of fruit in New Zealand, but owing to the rush at the end of the session nothing could be done. Nevertheless the Export Advisory Committee which was set up, has done very good work, and has helped to stabilise the New Zealand Apple export trade. It is hoped to have this Bill passed during the next session of Parliament. All districts in New Zealand are in favour of export con-

Regarding control of the local market

this is to be treated as a provincial matter, and it will be optional for any province to come under such control. We may say that the Nelson District has brought in a scheme of voluntary control for this season, and so far has met with every success. The fruit grading has been standardised and all consignments are passed by the Government Inspector. This fruit is not auctioned as has been done in the past, but is sold at fixed prices agreed upon between the representatives of the Control Board and the merchants handling same. The members of the Nelson Control Board have the good wishes of all orchardists throughout the Dominion.

"EXTON LATE" RASPBERRY.

With reference to a paragraph in the "Fruit World" dealing with the Exton Late Raspberry, the raiser, Mr. C. Exton, of Kinglake, Vic., writes:—

"Exton Late suckers the same as other Raspberries, but there is not nearly so much growth of suckers. The benefit is, that being less growth of sucker, the growth goes into the parent stool which grows much stronger in consequence.

"We sent last consignment of this fruit away on the 11th of March. This shows how the season extends with this variety."

QUEEN VICTORIA HOSPITAL FUND.

Ford Car Donated.

Melbourne.—The Urban Dealers of Tarrant Motors Pty. Ltd. recently donated to the above fund a new model Touring Ford car, which is to be raffled by the Metropolitan Fire Brigades through the courtesy of the Chief Officer, Harrie B. Lee, Esq.

Nothing Counts But Results

When you consign a shipment of fruit to your commission agent, you look only for results. Market information is important and prompt accounting is necessary,—but, in the final reckoning,—

"Nothing Counts but RESULTS"

To obtain the
BEST Results
on the
Sydney Market
... consign to ...

REEDY & LEE

:: Fruit Merchants ::
Commission Agents

City Markets,
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"Ask the man who sends
to us"

Victorian and Tasmanian Shipping
Number 173

TASMANIA

Export : Pest Control : Seasonable Notes : Items of Interest.

(By Our Correspondent.)

THE APPLE EXPORT SEASON is now in full swing, and shipments are regularly going forward for both interstate and overseas markets. The quantities exported up to date are very much below last season's figures, and in some instances it has been difficult to obtain sufficient to fill vessels requirements.

It is estimated that the total shipments overseas this season will only be about 700,000 cases; this is only half the quantity which was exported in 1923.

The few growers who have at all decent crops should make good profits from their fruit. Buyers are making attractive offers for all varieties, especially the later keeping kinds, such as Tasma and Crofton.

Full advantage is being taken of cold store facilities for holding fruit for later markets.

Black Spot.—Whilst the orchardist has invariably suffered to a more or less extent from the climatic conditions experienced during the early part of the season in practically all fruit centres; there is a great opportunity for the study of the occurrence of the different fungus disease which attack our fruits.

In many cases where the crops are better than the average, the results are ascribed to special treatments or spray applications.

It is the intention of the Fruit Division of the Department of Agriculture to make

a thorough investigation into these phases of control, and to conduct a series of experiments in the worst affected districts in order to demonstrate their value.

It is noteworthy that the Apple varieties holding the cleanest crops are those which have a late flowering period, viz., London Pippin, Worcester Pearmain, Stone Pippin and Late Aromatic standing out in this respect. Possibly these missed the acute stage of spore infection.

Interstate Shipments.—Some concern was caused at the commencement of the interstate export season at the action of the New South Wales authorities in limiting the import of Black Spot infected Apples to 10 per cent. of the contents of a case.

A meeting of the State Fruit Advisory Board was held to discuss this matter, and it was ultimately decided to send delegates in the person of the Fruit Expert (Mr. P. H. Thomas) and Neil Campbell, M.H.A., to interview the authorities and try and effect a suitable arrangement. After a number of interviews and discussions an arrangement was made whereby the

existing standards—"Special," "Standard," and "Plain"—should stand, and that under the designation "C" grade, 50 per cent. of spot affected fruit not more than $\frac{1}{4}$ in. in the aggregate on each specimen, should be admitted. This is much more satisfactory to the Tasmanian producer, and will allow for the marketing of a large quantity of good fruit, which is only slightly blemished.

It is understood that the New South Wales' action in making this limitation is based on an old agreement made at a Conference of Ministers of Agriculture in regard to diseases of produce that are common to both import and exporting States. It is felt that this should be reconsidered with a view to making a more liberal adjustment, as such acts hardly against both producer and consumer, especially in a season of short supply.

Fruit Fly.—The news that certain areas in Victoria had suffered by infestation of the Fruit Fly was received with perturbation by Tasmanian growers, especially as Victoria has always been regarded as a clean State, and an unrestricted import of fruits allowed by the authorities.

Although the quarantine regulations imposed are stringent, and may be inconvenient to the retail trade, no chances should be taken.

Tasmania is at present free from a number of troubles that occur on the mainland, and every effort should be taken to preserve this immunity. The advice that is freely given (generally by those who are not subjected to any risk): "That the Fruit Fly cannot exist under Tasmanian climatic conditions," is a very weak prop to lean on, and does not bear investigation. Insect pests have a habit of adapting themselves to many varied conditions, and no risks of introduction should be taken.

Australian Fruit Conference.—This is to be held at Hobart on the 28th of April. The Australian Pomological Committee will also sit during the following week, several important matters being listed for discussion.

Tasmanians are preparing a welcome and itinerary of social visits that should be quite on a par with previous functions, and will be pleased to once again have the pleasure of having the delegates with us.

It is unfortunate that the season has been so affected by the climatic conditions. Orchardists have generally been hit very hard this year, and the customary good yield will not be met with.

Seasonable Notes.

WINTER COVER CROPS for purposes of green manuring should be sown during this month in order that they may become established before the winter frosts occur.

This is a form of enriching the soil with plant food, which is coming greatly into favor. In growing "green crops" for turning under, it is advisable to sow alternate lands between the trees each year. This will facilitate late harvesting operations, which may be to the detriment of the growing crop.

The following are the amounts per acre of crops that are generally used for this purpose. These are varied or combined, as suited to soil or climatic conditions.

Peas.—Two bushels to the acre, with perhaps one bushel of barley, rye or oats.

Tares.—One to one and a half bushels per acre, with one bushel of barley, etc., added.

Rape.—Approximately 20 pounds per acre.

Rye Grass (Italian).—Approximately twenty pounds per acre.

Clovers.—From fifteen to twenty pounds per acre. If oats, barley or rye are used alone, sow two to three bushels per acre.

Woolly Aphis.—Where this is troublesome an autumn spray should be applied. Use either a commercial nicotine concentrate or the home-made mixture. In the latter case, be sure and obtain "dark stems" containing a high nicotine content.

Budding may still be carried out on Apples, Pears, Peaches, as long as the sap is running freely. Select well formed developed buds from productive and healthy trees.

Inspect "ties" of buds that have been inserted earlier in the season, to see that they are not cutting into the bark. If this is the case, with strong growing trees, they should be loosened to prevent damage.

DERWENT VALLEY FRUIT-GROWERS' COMPANY.

The sixth annual meeting of the shareholders of the Derwent Valley Fruitgrowers' Co-operative Company was held during February, when it was reported that 19,396 cases of Apples and 552 trays of Pears had passed through the sheds for the year; 17,757 cases of Apples had been exported, 1,639 sent to interstate markets, and all the Pears, excepting 22 trays, sent to England. The average packing shed cost per case for wages was 6s. Between August and November the gross profit from trading was approximately £90, the total net profit on November 30 being £30/14/8. One of the Directors, Mr. Cecil Walker, who had just returned from England, stated that the fruit arrived there in good condition.

SULPHATE OF AMMONIA is the ideal source of nitrogen for Orchard and Vineyard crops. . . . Used in mixed fertilisers containing phosphoric acid and potash or alone, as a top dressing for application during Autumn or early Spring, it is unrivalled.

Heavy sales of **SULPHATE OF AMMONIA** during 1923 reflect its popularity with Australian fruitgrowers.

Write for Sulphate of Ammonia literature to—

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE,
360 Collins Street, Melbourne, Vic.

N.S.W. and Queensland: The Australian Gas-Light Co., Haymarket, Sydney; The Broken Hill Prop. Co. Ltd., 28 O'Connell St., Sydney; The North Shore Gas Co. Ltd., 193 Alfred St., North Sydney.

Victoria and Tasmania: The Metropolitan Gas Co., 196 Flinders St., Melbourne; The Broken Hill Prop. Co. Ltd., 320 Collins St., Melbourne.

South Australia and Western Australia: South Australian Gas Co., Waymouth St., Adelaide.

Improvements in Fruit Shipment.

Valuable New Device for Stacking in Ship's Holds.

What is claimed to be an improved method of stacking fruit in a ship's hold for overseas markets, has been the subject of demonstration before Australian fruit exporters and representatives of shipping companies, and the following particulars will be of interest to readers.

Expert investigation into the cause of the unsatisfactory condition of fruit cargoes has shown that

what is needed

is some better method of ventilation through the stacks of fruit, and more uniform passage of the cooling medium, to prevent the accumulation of

On the other hand it is claimed that 20 per cent. more cased fruit can be stacked by using this device than by the present method of using wooden laths; so that if any slight extra cost is involved to the shipowner, it is more than made up by the additional revenue to be derived from the increased carrying capacity of the ship's refrigerated holds.

The new device thus apparently has possibilities as follows:—(1) increased efficiency in fruit carrying for all fruits; (2) development of the export of citrus and soft fruits; (3) added carrying capacity of ship's refrigerated chambers; (4) reduction of freight.

This matter is of such vital importance to growers and shippers that growers and shippers would be well advised to make further enquiries into the idea.



T shaped Steel Dunnage for separating cases of fruit in ship's holds allowing complete circulation of air.

carbonic acid gas which is given off by the fruit.

The idea put forward to make the improvements necessary was demonstrated by Mr. Kendall, Chief Engineer of the s.s. "Baradine," who has been successful in carrying Australian produce and fruit for more than 25 years, and who has made a special study of the whole question.

The Idea Explained.

By the use of a small T piece of steel (see sketch), each case is separated from all its fellows by $\frac{1}{2}$ in. space, which allows the free circulation of air all round each case, thus preventing any pocket of air or gas, whereas the method now in use only separates two sides of the case from its fellows.

Even the use of special cases cannot give the result claimed for the patent corrugated steel dunnage, and whereas the extra cost of the special case falls upon the shipper, the cost of dunnage is against the shipowner.

Answers to Correspondents.

Readers are invited to write to the Editor on any subject relating to the fruit industry. Please observe the following:—

1. Write on one side of the paper only.
2. State questions clearly, and give essential details surrounding the case, i.e., soil, aspect, altitude, rainfall, etc., or other information as the case may be.

Where answers to queries are given in these columns, any reader possessing additional information is invited to write giving the benefit of his experience.

Citrus Culture.—In further reference to the question in our last issue by G.E.S., Barham, River Murray, N.S.W., Mr. George Valder, Under-Secretary and Director, Department of Agriculture, Sydney, writes:—

"The general manuring of trees, such as those mentioned, should be carried out towards the end of winter, and some time before the trees are starting their spring growth. It is well to make a separate application of very soluble nitrogenous manures, like Sulphate of Ammonia, later in the spring, otherwise there is a danger of the Sulphate of Ammonia being leached out by rains before the tree can make use of it.

"If an application of manure is being made in the spring up to about Christmastime, and it is thought necessary to use a highly soluble nitrogenous manure, such as Sulphate of Ammonia, then it can be mixed with other manures.

"It is rather late in the season now to apply a very stimulating manure such as Sulphate of Ammonia. This Department would prefer to recommend either Blood and Bone or Bone-dust, mixed with about an equal weight of Superphosphate.

"Potash manures are very expensive, and before using this fertiliser largely, it would be wise to test it out on a plot for a few seasons to ascertain whether the trees were getting any benefit.

"The advantage of getting the fertilisers separately is that you can make up any proportion you wish, but you should be sure to mix thoroughly by turning the mixture completely over with a shovel several times on a hard floor. Lime should only be used with extreme caution.

"Irrigating Citrus Trees.

"A thorough irrigation every four to five weeks during the summer is sufficient for citrus trees on an average soil. Some soils are of low moisture capacity and retentive powers, and more frequent watering is necessary."

Black Walnuts.—H.H., Glenroy (S. Australia) writes:—"I am planting a block of Walnut trees from seed, and

CALIFORNIA PEACH CROP.

The Sutter country of California, U.S.A., produced last year 61,345 tons of Cling Peaches. This tonnage produced 2,458,300 cases of canned goods, and is nearly one-half of the total of Clings produced in the State during 1923.—"Better Fruit."

CLEANSING FRUIT CASES.

Tests were recently conducted at the Bathurst Experiment Farm (N.S.W.) to ascertain how long a fruit case must be immersed in boiling water to kill codlin grubs in cocoons. It was found that when the grubs were located in the joints of the cases a mere dipping in and out was sufficient. To kill them all an immersion of three minutes was required.

Up to four times the ordinary fumigating strength of cyanide proved insufficient to kill codlin moth grubs in the cocoons and in bandages.

would like to procure some of the Black American Walnuts mentioned in the 'Fruit World' as being grown in America, same being more disease-resistant than any other variety. I desire to obtain about 600 nuts, and will be glad to know where same can be secured."

Reply (by E. E. Pescott, F.L.S.)—I do not think that it will be possible to obtain the nuts of Black Walnuts in Australia. So very few mature trees are grown here of that species. "H.H." might try "The Manager, Wandiligong Nut Groves Company, Wandiligong, Victoria," on the chance of getting a few.

Otherwise, he must import the nuts from some of the Californian seed firms who deal largely in that business.

Growing Passion Fruit.

"H.M.Y." Ravensworth, N.S.W., asks:—"I have a row of Plum trees which are not at all prolific. I intend ring-barking the trees and planting Passion-fruit vines alongside, allowing the vines to grow through the dead branches. Do you consider the plan advisable?"

Answer (by H. Henderson, Mt. Evelyn, Vic.)—To ring-bark Plum trees and plant Passions so that dead limbs serve as a trellis is a novel idea for ornamental purposes, but unadvisable if the intention is to grow Passions for commercial purposes. Land intended for the culture of Passions should be well tilled before planting, and this can scarcely be accomplished satisfactorily if the Plum trees have not been grubbed. The spread of the limbs would also interfere with economical working.

Reply (by W. J. Allen, Department of Agriculture, Sydney):—"The dead trees, when the branches are removed, could be used as posts for supporting the vines. It is considered that the method mentioned by "H.M.Y." would involve considerable labor in picking the fruit.

ARE TOMATOES FRUIT?

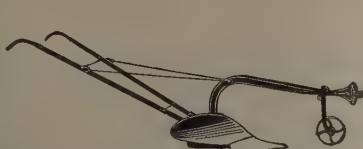
The following note is quoted from "Better Fruit" for November, 1923:—

"P. J. Stadelman, Mayor of The Dalles, Oregon, was gnashing his teeth for a time because he failed to look in the dictionary to find the definition of a Tomato. There was a difference of opinion between the mayor and the state food inspector's office as to whether the Tomato is a fruit or vegetable. Evidently some one thought it was a vegetable, and so labelled boxes shipped to Portland. Dictionaries and state food inspectors were in accord in declaring Tomatoes a fruit. Consequently Mayor Stadelman paid a 10-dollar fine in justice court for misbranding."

Orchard, Vineyard and Farm Implements D. HARVEY

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High Steel, Goose-neck Beam, Fixed Handles.



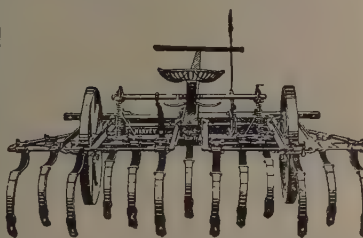
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With shifting or fixed handles. Made in 7, 8, 9 and 10 sizes.



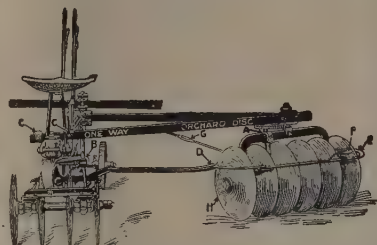
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SPRING TOOTH RIDING CULTIVATOR.



"HARVEY" ONE-WAY ORCHARD DISC
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4-FURROW POWER LIFT TRACTOR PLOW.



"HARVEY" GRAPE HOE.



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(By Ian P. Hamilton.)

The Second-Year Hen.

IN CONSIDERING the keeping of hens for two laying seasons, we have also to consider the alternative—that is, keeping hens for one year's laying only. Some few breeders have attempted this, but poultry farmers in general usually find it hard enough to raise sufficient pullets to replace half their entire stock in one year without attempting to replace the whole.

Discussing this question, the N.S.W. poultry expert says it is well to consider what the replacement of the whole stock annually means. Suppose the farmer has a flock of 800 layers. Under the usual practice of replacing 400 each year, he would require to hatch at least 2,000 chickens, because 400 pullets are the most one can expect from 1,000 chicks, after making allowance for half cockerels and a 20 per cent. loss in rearing. The farmer who essays to replace his 800 hens each year, therefore, must hatch 2,000 chickens annually, and successfully rear 1,600.

Indeed to make up the losses in his adult stock, say, 8 or 10 per cent., he must actually rear a few more. Such a task might appear simple to the person who has not attempted to rear such large numbers, but to those who know what is involved it presents different features. The fact is the poultry farmer has his limitations in rearing chickens, as regards both his own capacity and that of his equipment. There is no question that an

overwhelming number of poultry farmers will back up the idea that when everything is considered it pays them to keep hens to the end of their second year's laying.

It is, then, a matter of experience, and it is also borne out by the results of competitions. In fact, if the practice of keeping hens for two seasons' laying was not sound, there is scarcely a poultry farmer in the State who would not be bankrupt.

Again, if the second-year hens did not pay, all the farms carrying half first-year and half second-year hens would be only partially stocked with profit-producing birds, and instead of a farmer living on 800 hens his earning power would represent only half that number. It is, of course, obvious quite apart from figures that can be produced, that it does pay to keep second-year hens. Misunderstanding on this question, and of culling generally has been responsible for reduction of the stock on some farms to a non-supporting point.

INHERITED VIGOUR.

The first asset towards the maintenance of health is that the birds comprising the flock should themselves be strong and healthy, and should have been hatched from strong, healthy parents. Birds which have always been healthy, possess high vitality, and a factor of disease-resistance, which is very valuable in the maintenance of health. A few diseases are inherited, the most noticeable being white diarrhoea.

Most of them, however, are contracted after hatching, and the prevalence and mode of transmission are largely matters of environment.

The Value of Black Orpingtons.

I have been breeding Black Orpingtons for eight years, and ask for no better breed of poultry (states Mr. E. S. Bagshaw, of McLaren Flat, South Australia, in "South Australian Journal of Agriculture"). They are hardy, and great foragers, and do as well confined as they do when run at large.

They are a dual purpose fowl. After the second year they are worth 5/- per head for table purposes. When hatching and rearing, they are easy to handle, and a ready market is found for the cockerels.

They come in to lay at five months to six months of age, if properly fed. I have had the one strain for eight years, and always go back to the man I first bought from for a fresh cockerel or hen for a change.

One can keep breeding from the same pen for years, if eggs are set from different hens.

Do not forget to feed the birds well. I hatched 36 pullets last season and they came into laying in March and April, and from the end of April I have averaged 28 to 32 eggs a day. I attribute their good laying to time of hatching and to good and regular feeding. My feeding consists of bran and pollard. Twice a week I add crushed charcoal to the morning mash; midday I throw in half a handful of wheat per hen, and at night time another feed of wheat.

♂ DAY OLD CHICKS ♀

Blk. Orp., White Leghorn £6/6/0 per 100
£3/10/0 per 50
18/- per doz.

Good Laying Strain. Order at Once.
Delivered anywhere by rail.

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STONE FRUITS CITRUS TREES and QUALITY ROSES

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send for Lasscock's Catalogue and prices. These South Australian grown trees are unsurpassed for hardiness, healthiness, and vigor. They will jump from the start and bring profit to the grower. Our stocks are excellent and prices right. Special attention is given to packing.

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A Good Start means Everything!

It's the Winter Layers that Lay the Money !



Reader: there are at least five hundred thousand poultry keepers in the world to-day whose birds will keep up a higher winter egg production than yours.

They are the users of Karswood Poultry

Spice, situated all over the world. Half-a-million of them!

It's the winter layers that lay the money! Real money! and if there exists an economical method by which you can induce your birds, by perfectly natural means, to lay more eggs this winter, isn't it well worth investigating?

Such a method does exist! The Karswood method. But we don't ask you to take it for granted that this is true. We ask you to prove it for yourself.

It will cost you 1/- only.

Go to your local Grocer, Store-keeper or Produce Dealer. Get a 1/- packet of Karswood Poultry Spice (containing ground insects). Give it to a selected twenty birds either in the morning or afternoon mash at the rate of a tablespoonful to every twenty every day. Do not expect an immediate deluge of eggs. Karswood does not "force"—it achieves its object by a natural development of the egg cluster.

Within a fortnight or three weeks you will notice a decided improvement in the health, virility and plumage of these twenty birds, and their egg returns will show a pleasant increase.

Continued use of Karswood will make you an ardent supporter of this Karswood system, as are these users whose letters we have reproduced below.

"ALL IT CLAIMS TO BE."

150 Camberwell Road,
Auburn, Victoria,
7th June, 1922.

Dear Sirs,—

I have been using "Karswood" Poultry Spice for some time now, with excellent results. It is with-

out doubt one of the best poultry spices on the market. I have also used the "Karswood" Chicken Powder with very effective results as regards chicken ailments, etc., and I must say that the results from the Spice and Powder are all that it claims to be.

(Signed) C. McDONNELL.

NOTE THE ECONOMY

1/- packet supplies 20 hens 16 days
2/- packet supplies 20 hens 32 days
13/- tin (7lb.) supplies 140 hens 32 days
14lb. tins, 25/-; 28lb. tins, 48/-.

Makes 12 hens lay for 1/2d. a day

"KEEP EGG BOXES FULL."

Model Poultry Yards,
Merewether, via Newcastle,
N.S.W., August, 1922.

Dear Sirs,—

This is to certify that I have used your "Karswood" Poultry Spice, and for getting birds into show condition and health, I find nothing better; also to increase the egg yield.

I am an Exhibitor in all the leading shows in N.S.W., and can recommend "Karswood" Spice to all who wish to be amongst the winning cards, also to keep their flocks in the best of health and condition, and to keep the egg boxes full.

You may use this as a guarantee of my faith in "Karswood" Spice, as I am one of the leading Fanciers in N.S.W., and am known all over the world. So if this is of any use to you as a testimonial I shall be pleased to see it amongst your advertisements.

(Signed) C. A. CLARKE.

"ASSISTS THROUGH MOULT."

Rockford Road, Tahmoor, N.S.W.,
19th January, 1923.

Dear Sirs,—

I hope I shall now be able to forward more consignments, as I find "Karswood" Poultry Spice assists the fowls through their moult, and brings them on laying much quicker.

I am sorry I was short of this Spice last month, but hope to keep it up to them in future.

(Signed) C. E. CARTER.

AVERAGE 4½ EGGS A DAY FROM 6 HENS IN WINTER.

"Warreen," 15 Gordon Street,
Brighton Beach, Vic.,
27th August, 1923.

Dear Sirs,—

Adverting to your letter of the 21st instant relating to "Karswood," kindly note that I have no objection to you using the facts I have placed before you, for advertising your Spice.

I mentioned that my first hen commenced laying on the 20th May, 1923, and the sixth in July (this bird made too much flesh), so I therefore claim 7 days to average up the time between the first and sixth, when some had not commenced laying.

Therefore, counting the three months up to to-day (27th Aug.), my total of eggs produced stands at 352 (three hundred and fifty-two). Rough av. 3, 4/5 per day for 92 days.

The number of eggs received this month stands at 122 for 27 days—average 4½ per day.

I am agreeable that you substitute these figures for those in my previous letter, should you deem it advisable. You will be notified from time to time of figures, etc.—Yours faithfully,

(Signed) C. R. NEVILLE.

In these and dozens of similar letters lies the proof of what we claim. Make the test, and prove the profit to your own satisfaction.

You have nothing to lose for "Karswood" cannot force or injure. It contains no harmful ingredient of any sort. No Ginger, No Gentian, No Chillies, No Cayenne, No Capsicum, nor anything else that can harm. We guarantee it to be harmless.

If your local dealer cannot supply you. Write to the agents for your State, who will send you a trial packet at the following rates (post paid)—½lb. pkts., 1/6; 1lb. pkts., 2/9.

Agents for Victoria and Tasmania:

HENRY BERRY & CO.
PTY. LTD.
COLLINS STREET, MELB.

Karswood Poultry Spice

GUARANTEED HARMLESS

Makes Twelve Hens Lay for a Halfpenny a day.

Another strong point in their favor is that when hatched in August, the pullets do not moult. One more factor in their favor is the color of the egg. If used for export, the brown egg is preferred.

The ideal mating is a 10 months' to 12 months' old cockerel, mated to second season hens. If the hens are medium sized, use a cockerel a little larger. Be sure that the hens are fine boned and sleek in the head. Anything coarse and heavy will give very sluggish progeny. The same applies to the cockerel.

One of the most important things in breeding poultry is the size of the egg. This year every egg I hatched weighed 2½ ozs. or more. When I finish breeding I lock up the cockerels, so that all the eggs will be infertile. An infertile egg will keep for months, whereas a fertile egg will soon go stale.

With good feeding and housing a flock of fowls should average 200 eggs per bird. I use incubators and any hen I can obtain for hatching.

Do not feed the chickens until they are at least 48 hours old, and then only give them a little at a time. Always have gravel, shell grit, and finely ground charcoal on the floor of the brooder.

Care must be taken to have shallow tins for drinking, otherwise some of the chicks will be drowned. Always round off the corners of the brooder, otherwise the chickens are apt to suffocate one another.

Provide plenty of green feed. Three times a week I clean out the run, and each time cover the bottom with an inch of turf covered with natural grass.

Bee-keeping Notes.

Examining a Hive.

TO PREPARE TO EXAMINE a colony of bees it is necessary to have an efficient smoker and a hive tool or a lever the shape of a screw-driver. It is advisable, too, to have a veil in readiness to afford protection for the face.

There are apiarists that do not use a veil, but the beginner is advised to have it carefully adjusted, for even the most practical apiarists like to wear a veil, or have it on the hat so that protection can be had when required. However, if the manipulation is carried out in the right way there will be very little trouble as regards stinging.

A colony should not be examined unless the day is fine enough to allow the bees to work freely, and it seldom happens that a colony should be examined during winter months.

Before attempting to remove the cover, it is advisable to give the guards at the entrance a couple of puffs of smoke, then raise the cover about 2 inches, and give two or three puffs of smoke right over the

frames. The cover can then be removed. Note should be taken whether the bees are tending to become excited at any time during manipulation, in which case a little more smoke may be given, but there is no need to overdo the smoking, for unnecessary punishment of this kind demoralises the bees.

To remove a frame, lever the adjoining ones, so as to give sufficient clearance to prevent crushing the bees. If there is any burr comb, it is best to cut it as near as possible to the adjoining frame.

When examining combs, always hold the frame so that the comb will be upright, otherwise the new honey will drip about the hive, while the comb, having no support from the frame, is likely to be damaged.

PROVIDE RESTING PLACES.

To reduce the danger of drowning to a minimum, pieces of cork about an eighth of an inch thick should be distributed over the surface of the water reserve. In the absence of cork, thin discs of soft wood, which will float, may be utilised. Old carbide drums that have been cleaned thoroughly make excellent watering receptacles for bees. These and other vessels in which the supplies are contained should be placed in the centre of the apiary, or very close to it. Watering troughs will not cost much, and the saving of bees will repay the outlay.

FRUIT FOR THE SAILORS.

"Jack" is Appreciative.

The South Australian Fruitgrowers and Market Gardeners' Association donated to the Citizen's Committee a considerable quantity of fruit for the use of the sailors of the visiting special service squadron.

In Victoria several fruitgrowers' associations and individual orchardists donated fruit for the sailors per medium of the Y.M.C.A., which organisation was acting in co-operation with the Official Fleet Welcome Committee in providing meals and sleeping accommodation for the men on leave.

Keen appreciation was expressed by the men for the kindness of fruitgrowers in supplying the fruit, and for the efficient service of the Y.M.C.A.

The Vice-Admiral (Sir Frederick Field) stated that the men were obtaining vivid and happy recollections of Australia, and would carry back to England information which would be the propaganda of the best possible kind.

There are thousands of young men who want to enjoy the fruits of success, but how many are there who are willing to pay the price in hard work that success exacts?

FIRST!

.. THE ..

Latham Dehydrators

The Widest Fruit Drying Experience in the world is behind these plants. The best possible recommendation is the extent of one's patronage. My plants attract by far the largest drying business in the Southern Hemisphere.

Some Installations

Purchaser	Principal Fruits
Merbein Dehydration Trust, Mildura	Sultanas
Tasmanian Dehydration Pty. Ltd. Bridgewater	Apricots Prunes Apples
Charles Martin, Yackandandah	Prunes
Swallow & Ariell Ltd. Port Melbourne.	Carrots Turnips Cabbages, etc.

Lemon Processing Plants.

Dried Fruit Graders

Dried Fruit Boxing Presses

Apple Slicing Machines

Belting Pulleys, Shafting, Bearings, Engines and Boilers, Cranes and Hoists, Piping, Trucks, Conveyors, Thermometers, Fruit Trays etc., etc.

D. J. LATHAM

157 Queen Street,
MELBOURNE,
AUSTRALIA.

Walnut Culture.

Should be profitable under Australian Conditions.

Soil: Location: Propagation: Varieties.

(By P. H. Thomas, Tasmanian Government Fruit Expert).

ALTHOUGH WALNUTS HAVE BEEN grown in Tasmania from the early days of settlement, very few plantations have been laid out on commercial lines, and no serious attempt has been made to establish a Walnut industry in the State.

The nuts that are at present produced are, with few exceptions, of a poor type. They are generally the product of seedlings, and consequently vary in size and flavour.

The present retail price of a good quality nut is in the vicinity of one and six to two shillings per pound. Walnuts are being more extensively used every day, and are becoming recognised as a nutritive and valuable food rather than a luxury to grace a holiday table.

Not only in Tasmania, but in most of the Australian States, little has been done in the way of setting out plantations of good quality nuts.

The present season's supplies do not nearly fill the demands, and make

it necessary to import from outside sources. Here is an opportunity that should appeal to the settler who can afford to devote a few acres to the culture of a good class Walnut. The prospects are distinctly promising, and although the long wait may daunt the speculator who requires a quick turnover, the plantation can be looked upon as an improvement and future asset to the property.

The ground can also be utilised to a great extent until the trees arrive at the mature and bearing age.

Soil Requirements.

As with most fruits, one of the principal requirements is a deep and friable subsoil, which will lend itself to drainage and not lie wet and sodden during the periods of heavy rains. The Walnut particularly thrives in loose, deep soils, which contain an abundance of organic matter. Light sandy soils overlying retentive clays are unsatisfactory. Although the trees will make a fair amount of growth, the foliage will be poor, and

the quality of the nuts inferior. The Walnut is a very deep-rooting tree, and stress is laid on the necessity of thoroughly examining the subsoil to a good depth before planting, as this will have a great bearing on the vigour and life of the plantation.

Location.

The Walnut is particularly susceptible to frost injury, and low, frosty situations should be avoided. Only a slight degree of frost will injure the young flowers, and with early blossoming varieties, great risks are run in this respect, even in suitable climatic conditions. Early autumn frosts are also responsible for a certain amount of damage, although the harm is often not discovered until the following spring, when it is found that a large amount of what should have been healthy young fruiting branches fail to come into bud because the frost had stripped the leaves too early in the preceding Autumn.

Propagation.

Walnut seedlings differ very much in type, and it is necessary to bud or graft any variety that is desired for propagation. Most of our Walnut trees in Tasmania have been raised from planted nuts and allowed to grow without being worked, consequently the majority of the Walnuts marketed are variable.

Some have large hard shells, and small kernels; some are of the soft-shell type, but of poor flavour, and it is difficult to purchase a pound of

"Higher than a Kite"

The Ellis Fruit Grader

Here's a copy of a letter just to hand:—

Shepparton E.

"I may tell you I would not be without it now, it knocks hand grading higher than a kite."

(Signed) A. D. CRAIG,

18/2/24.

Shepparton.

Does not this speak volumes?

Instal one now—You can't do without it, either.

We are distributors of the British Wonder Car "The Arrol Johnston."

Write for particulars.

Ellis Grader & Motor Co.
226 FLINDERS LANE, MELBOURNE.

Agents:

Colonial and Interstate Agents:—Queensland—Sthrn. Q'land Fruitgrowers' Assn., Roma St., Brisbane. N.S.W. H. H. Hinds Ltd., 484 Kent St., Sydney. Sth. Aus.—Premier Machinery Co., Morphett St., Adelaide. New Zealand—A. Simmonds Ltd., Heretaunga St., Hastings. South Africa—Oswald Bros., Cape Town.



A RELIABLE SPRAYER

Here is a Plant that Practical Orchardists Value:

PUMP—Double-Acting, High Pressure, Single or Duplex as required, working up to 300 lbs. per sq. inch.

ENGINE—1½ H.P. Fairbanks-Morse, type "Z," operating on kerosene.

VAT—Approximately 80-gall. capacity; strongly made, easily cleaned.

HOSE—Two 30-ft. lengths 6-ply H.P. hose fitted with "Edgell" patent cut-off and Bordeaux nozzles.

TRANSPORT—Low-set, well-balanced and firmly put together.

Let us quote you for prompt delivery.

Danga, Gedye & Co. Ltd., Young St., SYDNEY

Walnuts of any known quality under a name, as is the custom with most fruits.

In the Western States of America, Walnut growing has received a lot of attention, and a valuable and paying industry has been built up. A great deal of experiment has been devoted to the question of suitable

stocks and varieties, and during the last fifteen years, great progress in cultural and propagative methods have been evolved.

The most popular stock at the present day is that derived from seedlings of the Californian Black Walnut (*Juglans hindsii*). This is found to be more hardy and vigorous than the ordinary Persian or English Walnut (*Juglans regia*), and has the great advantage of being resistant to the root fungus *armillaria mellea*, to which Walnut trees are particularly susceptible.

Experiments have of late years been made with various hybrids, and one, which is a cross between the English and Black Walnut, has produced some remarkable results. Seedlings, which are termed first generation hybrids (seedlings obtained from the first direct cross), when budded or grafted with the desired variety, have produced remarkably rapid growing trees, which have come into bearing at an early age. This characteristic, however, is only present in the first generation, and seed-

lings produced from these are variable and show a number of undesirable qualities.

Either budding or grafting can be practised for propagating any desired varieties. In the case of the former, the method known as "shield" budding is favored. This is best carried out in March or early April, when the sap is flowing freely, using buds from new wood.

Grafting is carried out in the early spring. The root stock is united with the variety by means of a tongue or whip graft. This is best performed by drawing the earth away from the stem of the young stock and grafting below ground. When completed, tied, and waxed, the soil is mounded above the graft. The writer has found this to be the surest way of raising trees by the grafting process.

If the trees are propagated on vigorous stocks by either of these methods, and cultivated and tended for the year, a strong rod should be produced that will be ready for planting out in the succeeding winter.

(To be continued.)

New Quinces.—"Better Fruit" for January, 1924, states that Luther Burbank has developed two new Quinces which he promises to give to the world shortly. They are said to be superior to any Quinces now grown.

A NEW APPLE.

The "Geeveston Fanny."

Reports from the Huon district, Tasmania, states that a striking contrast has been presented this year in the Apple orchards, where one particular variety has produced excellent crops of fine red Apples hanging amidst beautiful foliage, whilst other varieties have suffered badly from Black Spot.

The Apple in question is the little known Geeveston Fanny, or as some brand it, Huon Pride, a distinct variety often confused with the Fanny, or Lady in Snow, to which may be attributed the fact that it is not more widely planted. Despite a certain similarity in colour and size, the resemblance ends there. The Geeveston Fanny is a fine dessert Apple of medium size, well coloured, and unlike the Lady in Snow or Fameuse, is an excellent keeper, being held frequently without cool storage until June. Its ability to withstand unfavourable climatic conditions and immunity from Black Spot was prominently displayed this year.

A further report will be appreciated after this variety has been considered by the forthcoming Pomological Conference.

No man is ever down and out as long as there is fire in his heart and snap in his eyes.

.. THE .. Farmers and Settlers' Co- operative Insurance Com- pany of Australia Ltd.

Capital, £100,000.	Subscribed Capital, £70,000.	Paid Up, £35,000.
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THIS IS THE ORCHARDISTS' CO.

for insuring his buildings, fruit in store, Workers' Compensation, and other risks. An orchardist who becomes a shareholder and places his insurances with this Company participates in the profits which his own business creates. Thousands of farmers and orchardists are already shareholders. Write for particulars.

Victorian Branch:

Directors—Mr. SYDNEY SAMPSON, M.H.R., Mr. DUNCAN McLENNAN, Mr. P. H. H. IBBOTT.

Manager—H. L. CARROLL

Address: 360 Collins Street, Melbourne
YOU are invited to become a shareholder.

AGENT—LAWFORD'S FRUIT EXCHANGE PTY.
LTD., 60 Queen Street, Melbourne,
and Williamson's Road, Doncaster.

AGENTS WANTED.

ESTABLISHED 1866.

TELEPHONE 2979

Walters' Seeds

For the CHOICEST VEGETABLES and most
BEAUTIFUL FLOWERS sow our Seeds

We are Headquarters for—

Hunter River Lucerne

Cleaned by our Special Machinery, and free
from all weeds. SPECIAL QUOTATIONS for
Cwt. or Ton lots on application.

We have large stocks of the following in best
re-cleaned Seed: Broadleaf Dwarf Essex
Rape, Grasses, Clovers, and all varieties
of Green Fodder and Root Crop Seeds

Write at once for our Special Quotations.

Spraying Oils, Fungicides, Raffia

Illustrated Catalogue and Calendar, post free.

WATTERS & SONS
251 & 253 Swanston St., Melbourne

Growers of Citrus and Other Fruit should Ship to **MANCHESTER**

and so ensure minimum handling and
distributing charges to

The Most Densely Populated Area in the United Kingdom.

THE IMPERIAL FRUIT SHOW WAS HELD IN MANCHESTER

in October and November 1923, when over 5,000 exhibits of British and Imported Fruit were shown; there is an unlimited demand for choice fruit throughout the area which Manchester serves.

Over 2,300,000 packages of Overseas Fruit (mostly of American, Canadian and Mediterranean Countries' origin) were sold in the Manchester Fruit Auction Rooms during the year ended 30th June 1923, and distributed direct to Buyers' orders from the Manchester Docks.

There is ample scope in Manchester for developing a big trade in Australian Fruit!

In explanation of largely increased trade with Manchester, the General Manager of the United Fruit Companies of Nova Scotia Ltd., stated in his recent Annual Report:—

"This Market was the most consistent throughout the entire Season. Apples were handled much more rapidly and less adjustments were necessary—brought about by the fact that the facilities at Manchester are so much better than at any other English Port.

"They certainly have a very wonderful organisation, and we believe this is one reason why Manchester is becoming recognised as one of the best distributing Ports in England.

"Liverpool, from the standpoint of marketing our fruit, ranks second, while Glasgow is spasmodic, and in London practically until the close of the Season, much lower prices ruled than on any of the other Markets."

The fruit carrying steamers of the Federal S.N. Co. and "Scottish Shire" Lines load regularly for MANCHESTER, and early application should be made to the local Agents of the above-named Lines for tonnage.

Information as to Steamship services, Port and Forwarding charges and names of Manchester Brokers and Commission Salesmen willingly supplied on application to:—

W. J. WADE

Australasian Representative of the Port of Manchester

8 Bridge Street, Sydney, N.S.W.

Cables and Telegrams: "PORTOMAN" Sydney.

The Fruit Trade

Every Firm should be Officially Represented

if only by a line or two—Our Readers are Your Clients. It is an able and wise introduction, and when you go through the fruit districts our Readers will have already known you through us. It pays best to send Consignments Regularly—Not Occasionally—to the best markets, by doing so you strike the rising and falling markets and make a fair average for the season.

A ten times wider and better distribution will ensure a ten times greater production, at more payable returns. It is large and valuable exports from settled industries that make a nation prosperous.—Ed. "F.W."

This Journal is the recognised representative of the FRUIT TRADE in the Southern Hemisphere.

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS.
Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Hopkins & Lipscombe, Fruit Exchange.
Reedy & Lee, City Markets.
Rogers, F. H. G., Fruit Exchange.
Rule & Beavis, Fruit Exchange.
Wade, Noel, V., Royal Exchange (representing the North of England Fruit Brokers Ltd., Manchester, Eng.).

VICTORIA.

Melbourne.

Coastal Farmers' Co-op. Society, Western Market.
Davis, J., Western Market.
Lister, G., Western Market.
Mills & Co., J. B., 9 Queen Street (representing Nothard, Lowe & Wills Ltd., London).
Millie, A., & Sons, Western Markets.
McClure, Valentine & Co. Pty. Ltd., 49 William St.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke St.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co., Western Market.
Vear, F. W., 49 William Street.
Wade & Co., H. M., 439 Flinders Lane.
Woolf, G., Western Market.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Finlayson & Son, Fruit Exchange.
Geeves, H. V., Fruit Exchange.
International Fruit and Produce Co., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

WESTERN AUSTRALIA.

Perth.

Wills & Co. Ltd., G., Exporters.

SOUTH AUSTRALIA.

Adelaide.

Wills & Co. Ltd., G., Exporters.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters, and at London.

NEW ZEALAND.

Auckland.

Radley & Co. Ltd., Fruit Auctioneers.
Turner & Growers Ltd., City Markets.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.
Paterson, Thos., & Co., Vogel Street.

ENGLAND.

London.

Bradnum, Jas., Covent Garden.
Da Costa, Gerald, Covent Garden.

Jacobs, E., & Sons, Covent Garden.
Lewis, Edw. H., & Son, Ltd., Covent Garden.
Lewis, Edward H. Son Ltd., Covent Garden.
Margeson & Co. Ltd., Covent Garden.
Moore & Co. Ltd., F.W., 8 Arthur Street, London Bridge.
Monro, Geo., Ltd., Covent Garden.
Nothard, Lowe & Wills Ltd., Tooley Street.
Poupart, T. J., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salter's Hall Court.

Hull.

Bechervaise, E.
White & Son Ltd.

Liverpool.

J. Adam, Son & Co.
Johnson, T. S., & Co.
Roger White & Co., 37 Victoria Street.
Liverpool Fruit Brokers Assocn. Ltd.

Manchester.

North of England Fruit Brokers Ltd.
Port of Manchester, Captain W. J. Wade.

COMPARATIVE WEIGHTS AND MEASURES.

English Fruit Weights.

Apples, sieve is equal to 1 bushel, generally 38 lbs.
Cherries and Currants, ½ sieve equal to 24 lbs.
Gooseberries, Plums, ½ sieve, equal to 28 lbs.
Pears, sieve, equal to 50 to 56 lbs.
Foreign Weights.
Apples, Canadian, barrel, equal to 140 lbs.
Apples, American and Nova Scotian, barrel, equal to 120 to 130 lbs.
Pears, Californian case, equal to 40 lbs.

British and Australasian Market Reports

Great Britain.

Liverpool (6/2/24).

Messrs. J. C. Houghton & Co. report under date 6/2/24:—American barrel Apples realised 14/6 to 31/-; Virginian York, fetching 20/- to 31/-; while Winesaps fetched 22/- to 30/-.
Box Apples.—Jonathans, 11/3 to 15/-.
Rome's, 11/6 to 14/-.
Oranges: Valencias, 300's, 10/- to 14/-; Lemons, Messina's, 6/- to 10/- per case.

Liverpool (1/2/24).

Dried Fruits.

Messrs. Houghton & Co. report the following prices for dried fruits, Currants, Calamata, 45/- to 46/-; Zante, 48/- to 50/-; Gulf, 50/- to 55/-; Pan-arita, 53/- to 57/-; Vostizza, 60/- to 74/-; Raisins, ½ boxes, 43/- to 45/-; ¼ boxes, 50/- to 55/-.
Australian Lexias to hand per s.s. "Somerset" are selling at 45/- for two crown. Australian Sultanas, 2 crowns, cleared at 48/- to 50/-; 3 crown, 52/- to 55/-; Smyrnas selling 50/- to 52/-.
Good quality, 60/- to 66/-.
Fine fruit, 70/- to 97/6; few Caraburnu, 100/-.

London (15/3/24).

Messrs. T. Boss-Walker Limited report having received a cablegram from Messrs. Yeoward Brothers, informing them that the best American Newtown Pippins are bringing up to 17/6 a case, an exceptionally high price for American Apples at this time of the year.

London (15/2/24).

Mr. Gerald da Costa reports—American Apples, Oregon, Newtown, 13/-, 16/- per box; Brit. Col. Jonathans, 13/-, 15/-; Jaffa Oranges, 16/-, 17/6.

London (11/2/24).

Messrs. T. J. Poupart Ltd. report:—S. African fruit, choice Peaches, 18/21's, 12/-, 15/- per box; choice Nectarines, 18/21's, 8/-, 12/-; Plums (Apple Plum), 8/-, 10/-; Mangoes, 18/24's, 12/- tray; English Apples, Bramley and Newton Wonder, 10/-, 15/- per bushel.

New South Wales.

Sydney (26/3/24).

Apples.—Jonathans, 8/- to 13/-; S.L.'s, 8/- to 12/-; W.P.'s, 8/- to 11/-; Alfristons, 8/- to 10/-; Granny Smiths, 8/- to 14/-; Five Crowns, 8/- to 10/- bushel. Bananas.—Tweed River: Green, 16/- to 34/-.
Queensland: Sugar Bananas, to 30/-; Caven-dish, choice, to 34/-; others, from 15/-.
Grapes.—Sherry, 4/- to 6/-; Cornichons, 4/- to 6/-; extra choice, to 10/-; Muscatels, 4/- to 6/-; extra choice, to 12/-.
Lemons.—Local: 5/- to 9/-; Italian and American, 17/-.
Oranges.—Local: 8/- to 14/-; choice, to 18/-; American Navels, 27/-.
Passion-fruit.—6/- to 10/-; choice, to 20/- half-bushel.
Persimmons.—2/- to 4/-.
Pineapples.—Smooth-leaf, 6/- to 10/- double-case.
Peaches.—Yanco, 3/- to 5/- half-bushel; Victorian: 5/- to 9/- bushel.
Pears.—Tasmanian: W.B.C.'s, G.B.'s, B.B.'s, and B.D.C.'s, 7/- to 10/- a bushel, 3/- to 5/- a half-bushel.
Victorian: W.B.C.'s, 8/- to 10/-; B.D.C.'s and G.B.'s, 6/- to 9/- bushel.
Plums.—5/- to 8/- half-bushel, Victorian, 5/- to 10/- bushel.
Current quotations (exclusive of charge for cases for local fruits).

Victoria.

Melbourne (27/3/24).

The following are the wholesale quotations ruling at the Western Market:—Apples—Choice eating, 3/6, 6/-; choice cooking, 2/6, 4/-.
Bananas—Queensland, 20/-, 28/- double case.
Grapes—Muscatels, 8/-, 12/-; Waltham, 8/-, 13/-; R. Prince, B. Prince, 8/-, 12/-; Terrets, 8/-, 10/-.
Lemons—Victoria, 9/-, 10/-; imported, 18/-, 20/-.
Oranges—Imported, 26/-, 28/-.
Passion-fruit—Victorian, 28/-, 30/-.
Peaches—Medium dessert, 4/-, 5/-; canning, 3/-, 4/6.
Pears—B. de C., 3/-, 5/-; W. Bc., 3/-, 5/6.
Pineapples—Queens, 10/-, 12/- double case.

South Australia.

Adelaide (22/3/24).

Apples, eating, 3/- to 5/- per bushel case; cooking, 2/- to 3/-; Blackberries, 2/6 to 3/- per dozen lb.; Figs, 7/- to 9/- per case; Grapes, dark, 6/-; white, 5/- to 6/-; Muscatels, 6/-; Lemons, 6/- to 10/-; Peaches, 5/- to 7/-; Pears, eating, 5/- to 8/-; cooking, 3/- to 4/-; Plums, light, 6/- to 7/-; dark, 6/- to 7/-; Strawberries, 8/- to 9/- per dozen lb. Prices are exclusive of cost of case.

Queensland.

Brisbane (24/3/24).

Lemons, local, 3/- to 5/- a half-bushel case; Italian Lemons, 21/- a bushel case; South Australian Lemons, 13/- to 14/-; Persimmons, 1/6 to 3/- a tray; Custard Apples, 5/- to 12/- a half-bushel case; 4/- to 5/- a tray; Grapes, black, 2d. to 4d. a lb.; white, 1½d. to 3d.; Muscats, wet, 5/- a case; other lines, wet, 3/- to 4/-; Plums, Tasmanian, 14/- to 15/- a half bushel case; Pineapples, smooth leaf, 4/- to 6/6 a case; 1/- to 4/- a dozen.

Western Australia.

Perth (22/3/24).

Apples, dessert dumps, to 10/3; medium, to 7/-; small, to 4/6; flats, to 7/9; medium, to 5/-; others, 3/- up; cooking, to 7/3; others, 3/- up. Pears: Bartlett's, dumps, to 13/3; ripe, to

11/3; others, 5/- up; flats, to 10/3; others, 4/-; other varieties, to 9/6; medium, 4/- up; cooking, 3/- to 7/-; Peaches, to 17/9; others, to 10/-; Passion-fruit, prime, to 15/-; others, small, 6/- up.

Tasmania.

Hobart (22/3/24).

Fruit.—Pears, 1/9 to 3/9 ½ case; Peaches, 4/- ½ case; Apples, 2/6 to 5/- case; Strawberries, 1/-; Blackberries, 2½d. to 3d. lb.; Raspberries, 8d. basket; Plums, 2/- to 2/3 per ½ case.

New Zealand

Auckland (18/3/24).

Messrs. Turner and Growers Ltd., Auckland, write under date 18/3/24, as follows:—

According to reports received from the Cook Islands there is every prospect of a good crop of Oranges this year. Mandarins, however, are not grown in the Cook Islands. Prospects for consignments from Australia are good, especially if the fruit is of prime quality.

This firm, which is one of the largest of its kind in Australasia, with a large amount of floor space, and an up-to-date cool store on the premises, their turnover for last year being just on the half-million pounds. Over 200 fruitgrowers are shareholders in this well-organised business.

Dunedin (14/3/24).

Messrs. Reilly's Central Produce Mart report, under date 14/3/23, as follows:—Dessert fruits have realised good values, especially Plums, Pears, Peaches and Nectarines. Crate Delicious Apples realised 5½d. per lb. Peaches: Jam, 3d., 4d.; Dessert, 5d., 6½d., 8d. Nectarines: 5d., 8d.; cases, 7/-, 9/6. Local Grapes: Choice, 1/2, 1/7; Oamarus, 9d., 1/4. Plums: Dessert, choice, 5d., 8d. Pears: Choice Conference, Beurre Bosc., Marie Louise, Gancel's Bergamot, 3d., 5d.; cooking, 2d. per lb. Apples: Locals, cookers, 5/6, 7/-; Dessert Cox's, Delicious, etc., 8/6 to 14/6; windfalls, 2/6, 7/6. American Lemons: 37/6. Oranges: To arrive, 42/6. Bananas: Ripe, 37/6; green to arrive, 25/-; Walnuts: Wanted. Strawberries: 1/5½, 1/7, 1/9.

"THE KEY TO GOOD HEALTH."

Worry, which can best be described as over anxiety or fear, undermines health more than any other cause in this world. Quit worrying—develop confidence and faith in one's self, and the effect on health will be astonishing. If the digestion is out of order and constipation, flatulence and loss of appetite trouble you, don't scour the stomach with purgatives, but take a little A.M.S. as directed. It is a mild but very effective remedy made from Nature's herbs for all stomach troubles. At all chemists 3/-, or direct from T. A. Dickson, Chemist Geelong at 3/6 per bottle.

Open Letter to Australian Fruit Growers and Shippers.

REILLY'S CENTRAL PRODUCE MART. LTD. Dunedin, N.Z.

Gentlemen:

During 1923 we had the pleasure of faithfully serving growers in N.S.W., QUEENSLAND, VICTORIA and ADELAIDE, selling on their behalf at auction and by private treaty, LEMONS, PEARS, MANDARINS, ORANGES, PASSIONS, BANANAS, LEMONS, GRAPEFRUIT, PERSIMMONS, LOQUATS, POORMANS, FIGS, SEVILLES, FRESH and CURED GRAPES, APRICOTS, PEACHES and APPLES with satisfaction to our consignors and customers.

The service given our patrons during the past twenty-one years has won the respect of consignors and customers in N.Z., ENGLAND, AUSTRALIA, CANADA, the ISLANDS and AMERICA, and we are justly proud of this fact.

If there are any growers, packers or exporters of choice dessert fruits, wishing to try our Dunedin markets, we respectfully offer you our service in this market.

With a desire to faithfully serve you,

We are, Sincerely yours,

REILLY'S CENTRAL PRODUCE MART. LTD.

Cable address:— "REILLY, DUNEDIN"

N.Z. Agents for:—

The Johnston Fruit Co., Santa Barbara.

The Associated Growers of British Columbia.

W. D. Peacock & Co., London, Liverpool and Hull.

Melbourne Representative:— **Mr. ESMOND RUSSELL, 60 Queen St., Melbourne.**

From whom all Shipping Information can be obtained

N.Z. Agents for:—

Hannah-Cloke Air Free Case.

Ellis Fruit Grader.

Black Leaf "40"

"Vallo-Giraffe" Sprays.

Combined Buyers Ltd., etc., etc.

1924 Suggestions to the Commercial Planter.

Merits of Various Fruits Discussed.

Suggestions for the 1924 planting season are contained in the fruit tree catalogue just issued by C. J. Goodman, Picnic Point Nurseries, Bairnsdale, Vic. The Manager of these Nurseries, Mr. G. W. Peart, is also a successful fruitgrower and a capable horticulturist. Mr. Peart writes:—

Plant these (specialising in any one or several) according to the adaptability of your location, and there is no investment that you can make that will be as safe and as profitable.

Almonds.

Our Australian markets require several times the present production of Almonds in the Commonwealth. With this home consumption really in its infancy and adequate Tariff protection from importations, Almond growing in Australia is safe and profitable for many more to enter into it.

Clingstone Peaches.

The consumption of this splendid dessert fruit has recently shown what wonderful expansion it is capable of. The canners are nearly all paying a premium for varieties of quality and coming in ahead of the Pullar's Cling. Get in right away and

plant the varieties Canners are seeking—viz., Phillips, Golden Queen, Levis, Tuscan, Goodman's Choice and Peak's.

Dessert Peaches.

For some years, these have almost been overlooked by planters, and consequently the demand is exceeding the supply. Your quickest money would come from High's, Hale's, Louis Grognet, and a few other white-fleshed freestones.

Apricots, Canning.

Notwithstanding the heavy crop of these during the season just finished, the proportion of really first-class quality was very limited. Canners are eager to secure really good canning lines, and there is nothing more profitable than Apricots if you have the right locality.

Apricots, Dessert.

As with Peaches, so with Apricots—the Dessert varieties, having been overworked by planters, are now realising high rates in each State. There is big money in the earlier types, such as Oullin's and Newcastle, but you must get the latter up to size.

Cherries.

It is a fact that fewer trees of this fruit have been planted during the past 10 years than would replace what have ceased to bear fruit, owing to death by old age, etc. It is therefore obvious that there is no better invest-

ment than Cherries—especially as the demand is increasing rapidly.

Pears.

For some eight years, varieties of Pears suitable for export and storing have been planted in really negligible quantities. There are several splendid types ripening after Bartlett (Williams) which will repay any planter for planting up in big acreages.

Apples.

The experiences of the past few years have disheartened a good many growers of Export Apples, but it is my personal opinion that we are just on the eve of a big planting throughout Australia in half-a-dozen varieties that have proved their worth. Given good prices for 1924 on the export markets, owners of land ready to plant up will see the real importance of getting in before the demand overtakes the supply in nursery stuff.

In conclusion, I would remind planters there is no over production of quality fruits. I can give figures for varieties sold on several different leading markets during the past six months that would surprise most growers. For instance Jonathans over £1 per case in Melbourne early December, 1923; good sized Yates 32/- per case in Sydney same month. Dessert Apricots and Peaches in earlier ripening varieties realised remarkably high rates throughout. Space does not permit of further particulars, but we have them here if you write.

Australian Commonwealth Line

FAST PASSENGER AND CARGO SERVICE TO LONDON

Via Adelaide, Fremantle, Colombo, Port Said and Plymouth, transhipping at Colombo for Calcutta, Rangoon, Madras and Bombay : : : :

VESSELS SAIL AS UNDER :—

	Tons	Brisbane	Sydney	Melbourne	Adelaide	Fremantle
T.S.S. JERVIS BAY	13,850	1st Apl.	8th Apl.	16th Apl.	19th Apl.	24th Apl.
„ LARGS BAY	13,850	22nd Apl.	29th Apl.	7th May	10th May	15th May
„ HOBSONS BAY	13,850	17th May	24th May	28th „	31st „	5th June
„ ESPERANCE BAY	13,850	14th June	21st June	25th June	28th June	3rd July
„ MORETON BAY	13,850	12th July	19th July	23rd July	26th July	31st „

Taking Wool, General and Frozen Cargo at Lowest Rates.

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Offices : BRISBANE SYDNEY, MELBOURNE, ADELAIDE.

AGENTS AT ALL OTHER AUSTRALIAN PORTS

THE U.S. PRESIDENT AND AGRICULTURE.

The Importance of Organisation.

In his address to Congress, President Coolidge touched on many subjects which are of particular interest to the rural population. In regard to agriculture, he said:—

"Indirectly the farmer must be relieved by a reduction of national and local taxation. He must be assisted by the reorganisation of the freight-rate structure which could reduce charges on his production. Cheaper fertilisers must be provided.

"No complicated scheme of relief, no plan for Government fixing of prices, no resort to the public Treasury will be of any permanent value in establishing agriculture. Simple and direct methods put into operation by the farmer himself are the only real sources for restoration.

"He must have organisation:

"His customer with whom he exchanges products of the farm for those of industry is organised; labour is organised; business is organised, and there is no way for agriculture to meet this unless it, too, is organised.

Systems of co-operative marketing created by the farmers themselves, supervised by competent management, without doubt would be of assistance, but they cannot wholly solve the problem. Our agricultural

schools ought to have thorough courses in the theory or organisation and co-operative marketing."

THE BRITISH RAILWAY STRIKE AND FRUIT TRANSPORT.

Mr. H. Dakin, of 15 O'Connell-street, Sydney, who is the Australian Agent for Messrs. Geo. Monro Ltd., Covent Garden, London, has forwarded the following extract from a letter from his principals, written about the end of January:—

"At present we are in the middle of a general railway strike, and the following facts may be of interest and some use to you.

"The 'Edinburgh Castle' docked at Southampton on Monday, January 21st at 9 a.m. with 11,000 packages of Cape fruit for us. She opened her holds at 2 p.m., but the railways were unable to accept a single package. However, by means of our lorries we had the whole 11,000 at our warehouses here before 4 Wednesday morning. Southampton is 80 miles from London."

Mr. Dakin remarks:—"The above shows what can be done by a firm which owns 45 five-ton Leyland motor trucks."

When an unpleasant task lies ahead of you, get it behind you without delay.

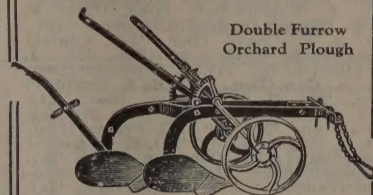
"Fruit World" Appreciated.

Cherry Gardens, S. Aust.
"Enclosed please find postal notes, being payment in advance for the 'Fruit World.' It is a magazine which I look for from month to month, and find a lot of valuable information contained in its pages. Wishing you future success."

6/3/24..

I.L.S.

"NEWLIGHT"



Double Furrow Orchard Plough

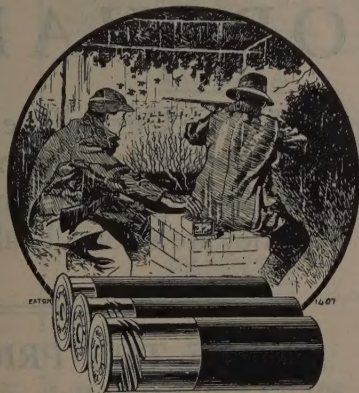
Weights only 2 cwt. Can be fitted with knife or circular cutters. Works right up to trees, both ways. Ample strength. The handiest orchard plough on the market.

Liberal extended terms if desired

H. V. McKay, Pty. Ltd.

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607 Collins Street, West, Melbourne



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J. Mues, P.O. Place,
Melbourne.

N.S.W.:
John Keep & Sons,
Sydney.

South Australia:
Gollin & Co. Pty. Ltd.,
Adelaide.

Wholesale Distributors :

Queensland:
T. McWilliam & Co.,
Brisbane.

South Tasmania:
John White,
Hobart.

North Tasmania
J. R. Green Pty. Ltd.,
Launceston.

It's Great Old Sport if Your Shells are Waterproof

THOSE drizzly days when the game flies low and fast—that's when you get real sport. On such a day, have you ever had a fine shot go winging out of range while you tugged at a wet and swollen shell? Then you know the value of waterproof ammunition. The Black Shells will not swell from a wetting. Prove it. Place a handful in water for half an hour. Get them wetter than they'd get in a week of rainy-weather use. Then try them in your gun. They'll chamber, fire and eject as if never touched by water.

U. S. The BLACK SHELLS

Loaded with Dupont Powder

GOLLIN & CO. PTY. LTD.

MELBOURNE, SYDNEY, ADELAIDE and WELLINGTON

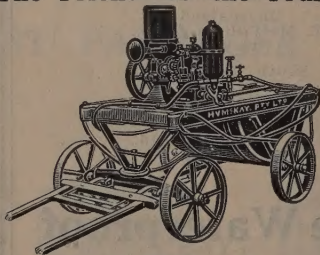
Sole Australian Agents for United States Cartridge Co.

SUBSCRIBERS' PAYMENTS RECEIVED.

The following are the subscriptions received from February 20th to March 20th, 1924. The month quoted in parenthesis indicates to what date the subscription is paid. These are exclusive of the subscribers who have paid to local agents or to our offices in the various States:—

Washington Dept. of Agriculture (Dec., '24), Angaston Fruitgrowers' Co-op. Socy. Ltd. (Dec., '24), G. E. Archer (July, '24), H. R. Alexander (July, '24), J. R. Baker (Dec., '24), C. Bamfield (Oct., '24), E. Bechervaise & Son (Nov., '24), W. K. Beecroft (July, '24), Bradley & Son (Oct., '24), H. C. Bray (Dec., '24), E. Buxton & Co. Ltd. (Dec., '24), J. Bunce (Oct., '24), P. R. W. Burns (Dec., '24), J. Butterworth (Dec., '24), F. Cave (Dec., '24), S. W. Chapman (Nov., '25), A. E. Chave (Dec., '24), Central Sugar Mills, Bureau of (Dec., '24), J. Collins (Aug., '24), A. Copeland (Dec., '24), A. Cox (Dec., '24), E. S. Davidson (Dec., '24), H. R. Deacon (Dec., '24), V. J. Doyle (Nov., '24), Wm. Fitzsimmons (June, '24), Sir J. G. Fraser (Dec., '24), H. Gaynor (July, '25), C. R. Glover (July, '24), J. T. Grosman (Dec., '24), Hammerli Bros. (Jan., '25), J. Hanenstein (Jan., '25), S. Hartwick (Sep., '24), E. W. Harris (Jan., '26), R. T. Harris (Feb., '25), J. B. Hickley (Dec., '24), Geo. Healey (Mar., '25), R. Hinds (Dec., '24), J. J. Hoare, senr. (Jan., '25), Hop Lee & Co. (Dec., '24), J. R. Hudson (Nov., '24), R. Janson (Dec., '24), Basil Krone (Feb., '25), T. H. Latch (Dec., '24), J. P. Larkings (Dec., '24), R. M. Leisk (Feb., '25), W. G. Lewcock & Sons (Dec., '25), H. Lineker (Dec., '24), E. G. R. Ludewigs (Oct., '24), H. W. Martindale (Dec., '24), C. McDermott (Feb., '25), A. H. McMurtrie (Dec., '24), Paterson & Co. Ltd. (Dec., '24), Perkins Bros. (Nov., '24), D. Puckle (Aug., '24), F. W. Roper (Dec., '24), Rosella Pres. and Mfg. Co. (Dec., '24), M. F. Ryan (Dec., '24), S. Sandow (June, '24), Sarnia Packing Pty. Ltd. (Jan., '25), S. R. Sach (Nov., '24), Selleck & Stubbs (Dec., '24), L. M. Shoobridge (Dec., '24), A. C. Simon (Dec., '24), Smith & Baldock (Dec., '24), V. Stooke (Dec., '24), I. L. Storie (Feb., '25), W. J. Taylor (Aug., '24), A. J. Todd (Jan., '25), H. L. Tompkins (Apr., '24), G. G. Turri & Co. (Dec., '24), A. T. Waring (Feb., '24), W. H. Pathe Van Wessenhagen (Dec., '24), Water Cons. & Irrig. Com. (June, '24), J. F. Wynne (Oct., '24), H. M. York (July, '24).

The Friend of the Fruit.



The Sunshine Power Spray

Two-Cylinder High-Pressure Pump,
Supplied with 1½, 2½, or 7 h.p. engine.
Durable and most effective.

Easy Extended Terms.
Full particulars posted promptly
on request.

H.V. McKAY Pty. Ltd.
Sunshine Harvester Works, SUNSHINE.
Showrooms, 607 Collins St. W., Melbourne

Don't WONDER what your crop will be!
MAKE SURE by using —

"HARBAS"

THE SELF EMULSIFYING RED OIL.

Many Oils LOOK like
— "HARBAS" —
But DON'T ACT like it

Use "HARBAS" for
Red Spider and all Scale and Aphis Pests

Use also

"Harola" Lime Sulphur

The Best Fungicide on the Market.

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Geo. Bailey, Narre Warren.
Lawford's Fruit Exchange, Doncaster.
Law, Somner Pty. Ltd., Block Place, Melbourne.
F. R. Mellor, 440 Elizabeth St., Melbourne.
Nyah Fruitgrowers' Co-op. Ltd., Nyah West.
Railway Packing Co. Pty. Ltd., Irymple.
Tresco Fruitgrowers' Co-operative Assoc. Ltd., Tresco.
S. J. Bevan, Avoca.
S. S. Gault, Somerville.
Tyabb & District Cool Stores, Tyabb.
Upper Beaconsfield Orchardists Pty. Ltd., Up. Beaconsfield.

Wholesale Representative for Victoria—
ESMOND RUSSELL, 60 Queen Street, Melbourne.

ORCHARDISTS!

We are Citrus Tree Experts. Write us
for all information on Citrus Trees.
Intending planters should plant our trees.
They are strong, healthy and well grown.

NOTE THE PRICE — £5 per 100

— F.O.R. Ryde or F.O.B. Sydney —

SWANE BROS.

Enterprise Nursery

ERMINGTON

New South Wales

Punishing Plant Pests.

Some quizzical suggestions.

WHILST Australian Fruitgrowers have complained that the past season has been one of the worst on record for pests, it is interesting to note that America has not been without similar troubles. However, even these apparently provide an opportunity for her people to indulge their fancy, as revealed by the following article, taken from the "Saturday Evening Post."—

The leaf spot's on the Cherry trees,
The psylla's on the Pear,
San Jose scale is on the Peach,
And caterpillars out of reach
Do multiply,
While mite and fly
And gnats pervade the air.
Although the trees are trimmed, and
fed

With showers of arsenate of lead,
And every day in every way
I try a different sort of spray,
The blighting pest
That knows no rest
Has left them sick and bare!

Some say they're in the borer's clutch,
And some, I've limed and sprayed too
much!

There's mold on the Delphiniums,
Chrysanthemums and Phlox,
White Aphis at the Aster roots,
Green Aphis on the Dahlia shoots,
There's bug and blight
To left and right
On Zinnias and Stocks!
No matter how I dust and spray
In every kind of modern way,
With Paris green and nicotine
And Sulphur, lime and kerosene,
The wretched crew
That suck and chew
Attack my flowers in flocks.

Some say the rains brought this about,
And others blame it on the drought!

The weevil has attacked the Beans,
The beetle's at the Beets,
The wilt's on the Tomato vine,
The corn has smut. All down the line
Potato bugs
And slimy slugs
Pull gustatory feats!
Although I make my crops rotate,
And in my spraying alternate
From fungicide, insecticide,
To dope, soft soap and germicide,
The loathsome lot
That blight and blot
Are ruining my eats!

Some say my land is sour or poor,
And some, I've used too much manure!

Bookkeeping and Income Tax.—
Save yourself hours of needless
worry. It's all worked out for you
in the Fruit World Annual (bound in
stiff covers). Worth £2/2/-: Price,
3/- post free from the Fruit World,
9 Queen-street, Melbourne (Vic.).

Healthy, strong and vigorous Fruit Trees

are obtainable at the

KINGLAKE NURSERIES

We specialise in profitable varieties. Fruit Trees of every description.

Catalogue Free on Application

JAMES W. LAWREY,

KINGLAKE NURSERIES,

YARRA GLEN, Vic.

Established 33 Years.

War on Orchard Pests

Armistice Impossible Defeat of Enemy Certain

Two factors will decide the fight:

- (1) Good Munitions
- (2) Good Generalship

(1) As regards the supply of Munitions for the Fruitgrowers to wage continuous war on insect pests and fungus diseases, there is nothing better than

MCDOUGALL'S

NO. 2 FRUIT TREE WASH

A combined Insecticide and Fungicide. Destroys all scale insects, Aphides, Plant Bugs, Red Spider and other Mites, and many Caterpillars; also checks Black Spot, Mildew and other fungus diseases.

KATAKILLA

Powder Insecticide Wash. Non-poisonous. Destroys Caterpillars, Aphides, Mealy Bug, Mites, etc.

DERRISINE

Concentrated Liquid Insecticide. Effective against biting and sucking insects. Equal in strength to PURE NICOTINE.

SULFINETTE

Concentrated Lime and Sulphur Wash.

OSTICO

Tree banding material.

(2) THE OTHER FACTOR

in defeating orchards pests is the grower who must use skill in spraying at the correct time and thoroughness in the work.

Write for our Booklet free. A GUIDE TO SPRAYING. Contains valuable formulae and data.

Write for particulars of Hand Spraying Appliances.

We are Agents for W. T. French & Co.'s complete line of

KNAPSACK SPRAYERS, ATOMISERS,

Etc. Also the Numan Patent Spray System of Irrigation.

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Fresh and Dried Fruit
Salesmen

Market Stands at Victoria and
Western Market and at Sydney

Citrus Growers

We handle Export Citrus.
Before consigning
consult us.

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Eastcheap, London, E.C.3.

Sydney Office and Warehouse:
Cor. Liverpool and Sussex Streets,
Sydney

Satisfaction Guaranteed

Prompt Payments Best Prices

New Zealand is an Important Market for Australian Fruit.

Ship Your Oranges, Lemons, Grapes to New Zealand



All consignments for this market will have careful attention and realize highest prices if sent to

The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable
"Peachbloom," Dunedin.



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There is not a better market
for you than

DUNEDIN

Ship under Brand



To—

THOS. PATERSON & CO.

Established 1879.

Fruit and Produce Brokers and
Auctioneers

VOGEL STREET - - DUNEDIN

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ORANGES LEMONS PASSIONS GRAPES

Cable us "PATRICROFT," Dunedin,
We will give you Market Values.

Address all correspondence to—P.O. Box 132, Dunedin

Box 428 G.P.O. Wellington.

FRUIT GROWERS

DIRECT

Your Fruit Shipments
to

UNITED GROWERS' LIMITED

Fruit Exchange,

BLAIR WELLINGTON ALLEN
St. N.Z. St.

We solicit growers to communicate with us if they require any information regarding the exporting of their Mandarins, Oranges, Passions, etc., to the New Zealand Markets. Prompt and expert service, and highest rates obtained.

IF YOU CONSIGN
to

UNITED GROWERS' LIMITED

Cable and Telegraphic Address: UNITED
Bankers: BANK N.S.W.

SHIP TO AUCKLAND, N.Z.

Consign to the Up-to-date
and Established Firm of

TURNERS & GROWERS — LTD. —

City Markets, Auckland
New Zealand.

Salesrooms comprise—
55,000 ft. of FLOOR SPACE,
including
FRUIT COOL STORAGE ON
PREMISES.

Staff of nearly 100 Employees
Competent Salesmen only
employed.

DIRECTORS:

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HIGHEST PRICES

PROMPT RETURNS.

CABLE ADDRESS: "Cantab"
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BANKERS: Bank of New
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The Auckland (N.Z.) Market
offers an Excellent Market to
— all Growers of —

MANDARINS
PASSIONS
ORANGES PINES
ETC.

— By Consigning to —

Radley & Co. Ltd.

...Fruit and Produce Merchants...

AUCKLAND, N.Z.

Growers will obtain Highest
Market Prices.

Our large salesrooms cover
22,600 feet of floor space, and
are right in the centre of the
Auckland City Markets.

Growers have no need to pre-
pay sea freight by shipping
through Stephen McCormick,
forwarding agent, Sydney.

Inquiries regarding N.Z. mar-
ket will be gladly answered.

Address correspondence: P.O.
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LAND."

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Wales.